

# MIND

## A QUARTERLY REVIEW

### OF

## PSYCHOLOGY AND PHILOSOPHY



### I.—GERMAN PHILOSOPHY IN THE LAST TEN YEARS

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[Translated by JOHN LADD]

IN the period from 1938 to 1948 philosophical production in Germany was restricted not only by the war and its consequences but as well by the supremacy of national socialism and its general attitude towards the development of free and creative thought. Many important works were never published, while others could not be completed. What has survived is merely a bare outline, since it represents only that scholarly life which was public and is no indication of what was really achieved. Even after 1945 the deficiency could not be remedied—difficult living conditions, restrictions of activities, and paper shortage are to-day still effective. In the account which follows the picture must necessarily be distorted, and this distortion must be recognised as the reason for the limited production. The silence of Martin Heidegger, Eduard Spranger, Günther Jacoby and others is not due to chance but is a natural consequence of a period whose *modus deficiens* is perhaps greater than its positive achievement.

Nevertheless some main tendencies can be discerned in the latter; at least if we ignore the mass of semi-scholarly productions of the period, by which the book markets before 1945 were flooded. Several lines of endeavour are clearly traceable, which, despite all the isolation of Germany, definitely link her with the general international situation in philosophy. Of these, four can easily be pointed out: an anthropological, an epistemological, an ontological-metaphysical, and an existentialist line

of thought. The last partially includes the first three and has most distinctly the character of a comprehensive general philosophy. In addition there are the special fields of investigation which have a certain independence and do not completely fit into this classification—namely ethics, legal philosophy, religious philosophy and the philosophy of history. Psychology, on the other hand, as long as it does not illustrate the anthropological tendency, will be omitted from consideration. Sociology and pedagogics will also be omitted. Since the demise of the *Kantstudien* the only completely worthwhile philosophical periodical remaining is the *Blätter für Deutsche Philosophie*, which has been under the able direction of Heinz Heimsoeth since the end of 1944. It is impossible to refer to the considerable variety of systematic and historical contributions which have appeared here. Hence it may be noted that this journal provides a conveniently available collection from which the following remarks can be followed up.

I. We shall begin with *anthropology*. From the beginning it suffered from the fact that the posthumous works of Max Scheler could not be published until now (twenty years after his death). His work and that of Helmuth Plessner had inaugurated the new "philosophical anthropology" in Germany, but it was not possible to continue in its elaboration because of the unfavourable political circumstances. Only one small work of Plessner's could be published: *Lachen und Weinen, eine Untersuchung nach den Grenzen menschlichen Verhaltens* (1941). Despite its restricted subject, it exhibits a great deal about the new method. Instead of occupying himself with the phenomena of expression he turns his attention to the peculiarly human reactions to catastrophe, and shows that they can be explained only in terms of the life of the spirit. The new direction first became influential at the beginning of the war through a group of writings among which the leading one was Arnold Gehlen's book, *Der Mensch, seine Natur und seine Stellung in der Welt* (1940). This important work radically rejects the traditional bifurcation of man into a natural-bodily and a mental-spiritual part; in place of this separation he introduces the conception of man as an undivided whole, cast in one piece—from his lowest to his highest achievements. Gehlen demonstrates this by the uniform way in which he comes to adapt himself to the surrounding world. This development is shown to be spontaneous even at the lowest levels, since man is born as a "deficient being" ("Mangelwesen")—not like an animal with ready made and fixed instincts, which take care of his

growth, but rather helpless and needing to adapt himself. He is in Nietzsche's words "das nicht festgestellte Tier" (the not yet fixed and determined animal); he has first to acquire the capacities which enable him to stay alive. In addition to this great disadvantage he has the advantage of being able to perceive the multiplicity of possible ends according to which he can realise himself. And the investigation shows how all the characteristic human activities and capacities arise from the completion of the task of first having to make something of oneself. The process begins at an early age with exploratory gropings, and continues in the play of the child, which consists in an interplay of perceiving and experimenting and which leads to objects in the environment being put to use. This kind of development is a sensory motor circular process, of the same type as, for instance, the circular process of learning to speak, moving back and forth between the poles of hearing and speaking. In general the object is to escape from an excessively strong stimulus, and the result is the utilisation of objects in the environment, the solution of problems and progressive achievement. A whole mass of anthropological categories are deduced from this general point of view, for instance, the creative "fantasy of movement" (*Bewegungsphtasie*), the "symbolism of movement" (*Bewegungssymbolik*), the effect of language on thought and on one's orientation to the world. The higher up in the chain of phenomena the richer the insights that are presented. These are concerned with such subjects as the imaginal character of ideas, the delayability, combinability and plasticity of drives, and the surplus drive which is available as usable energy. The whole structure of man's nature reaches its zenith in the functions of the will, of spontaneous activity and of self discipline. Even the question of what character is is answered from a new angle. The smaller writing "Zur Systematik der Anthropologie" (which appeared in the collected volume, *Systematische Philosophie*, 1942), adds some more thoughts in elaboration, and at the same time indicates the direction in which future investigation may be expected to proceed.

Gehlen's work was preceded by two others which supplement it in different directions, although they are written from widely differing points of view: Werner Sombart's *Vom Menschen* (1938) and Erich Rothacker's *Die Schichten der Persönlichkeit* (2nd ed. 1940). Sombart's point of view is sociological and follows the well known and tested methods of investigation of his earlier books. That of Rothacker is psychological. Rothacker means

by "Schichten" (levels) the psychic spheres which are arranged in strata, having different structures and different laws, but nevertheless related to each other—sometimes voiding and sometimes conditioning one another. In this connexion he introduces a novel interpretation of Freud's opposition of the Ego and the Id. Within the latter he distinguishes an animal part from an imaginative experiencing Id, and each of these parts has its own laws, its own tendencies and centre of control. Of the many various laws governing the construction of personality which he proposes only one can be mentioned here. This states that only the lower levels can operate independently of the higher ones, while the higher ones always need the lower ones in order to be able to function. The higher ones are known to us only as resting on the latter. Questions going beyond the individual are treated in a second work—"Problem der Kultur-anthropologie" (in *Systematische Philosophie*, 1942). Here the analysis begins with the relation of action and attitude, and proceeds to the structure of the higher cultures. In the latter he discovers a whole series of laws of opposites (e.g., of universal and particular tendencies), and comes to the conclusion that cultures are basically styles of life, but that a style of life and a view of the world are only two sides of the same whole.

From the phenomenological point of view, Hans Lipps made an important contribution to the problem of man in his *Die menschliche Natur* (1941). But among the psychologists Philipp Lersch took up the problem and carried it out in three directions which are indicated by the titles of his books: *Der Aufbau des Charakters* (1938), *Seele und Welt* (1941) and *Der Mensch in der Gegenwart* (1948). The last named work is concerned with the problem of the threat to human existence resulting from the mechanisation of modern life; only a radical transformation of the inner life can remove this danger. In the little book *Vom Wesen der Geschlechter* (1947), another side of the problem appears: there are certain ways in which man can be "held back" from natural alienation and estrangement. Although such methods are usually included under the subject of religion, they are here ingeniously found to lie within the field of artistic experience. Lersch denies the widely accepted thesis that man's uniqueness consists in his activities (activism, pragmatism, technocratism) since these are characteristic only of the Male's relation to the world. But the entirely different, more receptive and profounder valuations of the Female are needed to make this relation meaningful.

In this connexion there belong several other works, which



lie on the border of anthropology and which reach in part into other regions. Among these the works of Willi Hellpach are outstanding: *Einführung in die Völkerpsychologie* (1938, 2nd ed., 1944) and "Das Magethos" (in *Schriften zur Völkerpsychologie*, 1947). The tradition originally started by Wilhelm Wundt is definitely continued by him. This is illustrated by the richness of materials he presents from the fields of custom, ethos, usage, law, and in matters of conscience and religion. In all these he shows a very fine discernment of significance and meaning. Next to this we may place a fine and in its details an original little book by Kurt Stavenhagen *Heimat als Grundlage menschlicher Existenz* (1939). With the aid of the phenomenological method he shows in concrete terms how man's roots come from the value systems of the national and social environment. On the border of epistemology lies Hermann Wein's article "Das Problem des Relativismus" (in *Syst. Phil.*, 1942) which proceeds beyond the question of absolute and relative truth to a consideration of the causes of the dangerous dissolution of the concept of truth in our time. In contrast, on the border of psychology, stands the philosophical-graphological work of Robert Heiss, *Die Deutung der Handschrift* (1943), which introduces an inclusive analysis of the form of handwriting and completes his *Lehre vom Charakter* which appeared six years earlier.

II. In the *epistemological* field, there were a great many special investigations, but no comprehensive work of great importance or one presenting new problems. The great *Erkenntnislehre* of Carl Stumpf, formerly of Berlin, might be considered to approach most nearly to the latter description. This book appeared posthumously in 1939-40 in two volumes, and discusses a great many methodological questions. But it did not offer a new foundation for epistemology based on the new anthropological insights as had been expected by many. In the same way, Heinrich Rickert's *Unmittelbarkeit und Sinndeutung* (1939) written in his old age, can be regarded as a last echo of the type of investigation which reflected the problems of the beginning of the century but which no longer seem actual. As the conclusion to all the writings of Rickert it still remains like all his earlier writings of permanent value.

In sharp contrast to these are two writings on the problem of relativism: Eduard May, *Am Abgrunde des Relativismus* (1941) and Johannes Thyssen, *Der philosophische Relativismus* (2nd ed., 1947). Both were written as prize essays for the Prussian Academy of Sciences, and both consider their subject from the

epistemological point of view—in contrast to H. Wein. Thyssen argues predominantly from the problems of the humanistic sciences, in keeping with the trend of his earlier book, *Die philosophische Methode*. May, on the other hand, presents a new version of the relativity problem from the natural science aspect, and develops the distinction between two kinds of *a priori* in the natural sciences—in marked opposition to N. Hartmann's *Metaphysik der Erkenntnis*. He does not reach an actual solution to the problem of the relativity of truth, since he holds this to be an impossible demand at the present stage, but he shows the way to a solution as far as it is possible. Close to this way of treating the question are two small writings of Max Wundt, *Die Sachlichkeit der Wissenschaft* and *Wissenschaft und Weisheit* (1940). They show that human knowledge in its endeavour to be objective and relevant is always fated to be able to understand only that which it does not wish to understand, while that which is really sought evades its grasp. It follows paradoxically that it is compelled to miss its essential goals, although the unwished for results indirectly achieved are more important than those sought for.

*Die philosophische Grundlehre* by Rudolf Zocher appeared in 1939. In it is raised the old question—which of the philosophical disciplines is the fundamental one upon which the others are grounded. He decides in favour of a "transcendental" epistemology, whose descent from the neo-Kantian tradition is not disowned and which stands very closely to Rickert's "intentions". Of special interest are a group of smaller writings which arose from quite different sources, but which are still definitely connected with one another. Theodor Litt, in his essay *Die Selbsterkenntnis des Menschen* (1938), points out that in all knowledge of oneself the otherwise universal law of knowledge, that the object be independent of the knowing, is violated: subject and object appear united. Thereby the subject changes itself, since it does something which it does to itself. Again, the relation of knowing is itself also changed; the resulting whole is the "total existence" of the man who knows himself, and through which thinking attains its highest peak. And this thinking in turn is "identical with the whole which is the end of self-knowledge". This leads to a thoroughly woven dialectic consisting of the "interaction of being and self knowledge". In this interaction the separation of the two parts is shown to be an essential moment of their identity.

Curt Weinschenk presents the problem on a broader basis in his *Das Bewusstsein und seine Leistung* (1940). If we conceive

of our self observation, as opposed to understanding of natural objects, as a sort of "sideshow" of our own understanding, *e.g.*, of our perception, we discover a centripetal process originating in the object: we cannot understand the last elements in it, but only "experience" them, in the activity itself of knowing which we are performing. But while we are thus experiencing, we know something quite different—the objects in space and the external world. This occurs already in perception and imagining, but even more in thinking and actual knowing. Such is the problem, and this new rendition is itself very valuable: the solution which is proposed by the author would make a chapter all by itself, since he expounds a whole theory of consciousness, and so it will be passed over here. Again, another point of view is represented in the book of Hans Driesch, *Selbstbesinnung und Selbsterkenntnis* (1940). The second part contains a discussion of Litt and Weinschenk. The first part, however, expounds his basic principles. At the basis of his system lies the emphasis on the extreme contrast between the "unconscious bodily psychic drives" and "what might be called 'consciousness'", which is the actual object of self-observation and is identical with the basic content of the Cartesian selfconsciousness. The latter is the pure self-experiencing subject of the proposition "I experience". Hence it is quite different from the psychic bodily drives. A second and smaller writing of Theodor Litt takes up another line: *Das Allgemeine im Aufbau der geisteswissenschaftlichen Erkenntnis* (1941). In this he is concerned with the *a priori* element in the humanistic sciences, as well as the relation of the latter to philosophy. He makes a philosophical diagnosis of the assumptions made unconsciously by psychologists, sociologists, linguists and historians: these are shown to include the whole framework of human spiritual life, and the reliability of the manifold inductive findings of these sciences "stands or falls with the philosophical justification of the *a priori*". The conclusion is that the general and the particular are not alternatives, since the one is contained in the other, and hence the investigator does not have to choose between them.

Two other studies in quite a different direction may be mentioned. Ernst Mally, *Wahrscheinlichkeit und Gesetz* (1938), investigates the logical methods of the exact sciences in general. H. Voos's *Transzendenz und Raumanschauung* (1940) is more specialised. It is a new version of the fundamental epistemological problem, that is not restricted to the consideration of space and intuition, but also includes a

discussion of the inevitable opposition of object and representation.

III. *Metaphysics* in the speculative sense is represented by only a few authors. The offerings are richer if one includes under this heading the new studies in ontology (*Seinstheorie*), which are characterised by their emphasis on the study of the categories and along with them the fundamental epistemological problem. Even more published material could be included under metaphysics, if we extend this term to cover the philosophy of nature. This is desirable since most of the writers in this field tend to make it a "Weltanschauung". However, only a very cursory account can be given of them here.

At the beginning of the period covered by this article, we find two works, both in 1947, which point backwards as well as forwards: Max Wundt, *Ewigkeit und Endlichkeit, Grundzüge der Wesenslehre*, and Josef König, *Sein und Denken. Studien im Grenzgebiet von Logik, Ontologie und Sprachphilosophie*. The first has the character of a philosophical system in outline: it is written in the tradition of German idealism, but develops its problems in a contemporary vein. His treatment of the realm of spirit in the second half of the book is especially clear and fine. König's study is based on the phenomenological method. He presents many acute analyses and makes original advances in the problem of the levels of being. However, his theory remains one based on being and consciousness.

One great and important sketch of a system was published by Wilhelm Burkamp shortly before his death. This work, *Wirklichkeit und Sinn* (two volumes, 1938) gives its two basic theses in the subtitles to the two volumes: to the first, "The objective realisation of meaning in a meaning-free reality". The ideal content (meaning), to which man can devote his life, is not given with the meaning of the world as it is found in our experience of the world of physical objects, but rather must first develop out of it. Man finds himself in a struggle between having to recognise his total dependence on the natural world, while at the same time he is aware of values which oblige him and demand that he be determined by something beyond this world. He seeks a solution but can find it only by directing himself to ideas (meaning). But this direction is not indicated by the nature of reality, but rather by the subjective tendency which he has within himself. Having stated the problem thus, he examines the natural psychic, mental and social cosmos, proceeding then to valuation and practice, uncovering the "wishful deception of the theoretical", and analysing several

categories, space and time, mathematical structure, etc. In the field of ethics the value aspect reappears, and with it the ends of man. In his concluding remarks he emphasises the idea of "the responsibility before the future", of elevated biological thought and of the task which history gives to artistic creation.

The projects in ontology constitute a special chapter, although only one of these was actually brought to completion in our period. The famous work of Martin Heidegger, *Sein und Zeit*, which had evoked great interest both in and out of Germany, was never finished. But its influence has been great even up to the present. Also Günther Jacoby was never able to complete his *Allgemeine Ontologie der Wirklichkeit* which he had begun two decades ago, and for which he was to publish a second volume on the theory of being (ontology of transcendence). On the other hand, Nikolai Hartmann, after *Grundlegung der Ontologie* (1935) had opened up a new line of development, proceeded to publish two larger works—*Möglichkeit und Wirklichkeit* (1938) und *Der Aufbau der realen Welt, Grundriss der allgemeinen Kategorienlehre* (1940). The third volume of this set, the *Spezielle Kategorienlehre* (philosophy of nature), could not be published. Nevertheless, the two published writings contain the gist of the scheme, which is further elaborated in a smaller writing, *Neue Wege der Ontologie* (in *Systematische Philosophie*, 1942. 2nd ed., 1947). The first of these books presents a new analysis of the modal categories. The main thesis is that the essence of reality, which is so difficult to conceive, if it is understood as the kind of being possessed by the world in which we live, can actually be so conceived in terms of the relation of the modes which govern it. The study shows that the traditional conception of these modes cannot account for the kind of being which reality possesses, and so the modes themselves must be interpreted in a completely new manner. The new interpretation consists of a thorough analysis of their mutual relations—the "intermodal relations"; and the conclusions lead directly to new determinations of the nature of becoming, obligation, the puzzling character of aesthetic objects, etc. Also a new formulation and justification of the principle of sufficient reason is developed. Consequences are also found for the problem of ideal being, the realm of logic and knowledge, the general conclusion being that these modes and their interrelations vary with each of these realms. The second work develops the new ontological conception of the categories, and applies it to the group of "basic categories" (*Fundamental kategorien*)—that is, those categories which are common to all

levels, spheres and realms of being, and which are articulated even in the highest levels of being. In this connexion we find a great many "categorical laws", which underly the stratification of the real world and determine its inner structure. As a result we are led to the so called "laws of dependence", and eventually to the controversial problem of moral freedom—for which a new solution is proposed.

Among those who have worked out Hartmann's ontology we may mention Aloys Wenzel, especially in his *Philosophie der Freiheit* (1947). He adapts the theory of levels and certain of the categorical laws to neo-Thomistic metaphysics, and in a somewhat extraordinary fashion he also introduces a little of Schopenhauer's *Will and Idea*. This book treats several questions bordering on contemporary natural science, but actually it is more speculative than a real analysis. Along the same line of popular metaphysics we may place Aloys Müller, the new edition of whose book, *Einführung in die Philosophie* (1936), appeared in 1947 under the title *Mensch und Welt in ihrem realen Aufbau*. In the formulation of his thoughts this book is more acute than that of Wenzel, although the thought of both is related. A worthwhile contribution to ontological investigations was made by Rudolf Laun in his *Der Satz vom Grunde* (1942). Although this book bears the subtitle, "A system of epistemology", it actually extends into ontology—and so may be discussed here. It contains a comprehensive survey of the idea of sufficient reason from the four causes of Aristotle to the *principium rationis* of Leibniz and Wolff, etc. He gives a complete critique of the problems of the fundamental principles of concrete things and of the basis of knowledge, of axioms and categories, the foundations of mathematics and logic, functional principles, causes and the ground of obligation. He does not consider the new philosophical grounding of the principle of sufficient reason, nor does he claim to have solved the problem of being which is contained in this principle. Still he introduces the considerations which are decisive in connexion with the problem of a "transcendent ground of knowledge" and of a non-relativistic concept of truth.

In a slightly different vein from the main problems of metaphysics are those studies originating in natural science—some of which are written by natural scientists. These studies transgress the boundaries of their own sciences into the field of philosophy, but are written as if they were really in philosophy. Such are all the writings in theoretical physics which touch on epistemology and which raise metaphysical questions—which

they seek to answer with insufficient means at their disposal. Among these we may include the later lectures and brochures of Max Planck, which appeared in the last decade or at least were reprinted in this period. To this group also belong the writings of Max von Laue, Werner Heisenberg, C. F. von Weizsäcker, Jordan, etc. It is well known that since the time of Max Planck there has been a great deal of discussion on the popular level of the thesis that the freedom of the will can be deduced from subatomic phenomena. But even where such great errors are avoided, there is still a tendency to draw conclusions from quantum mechanics for the whole of epistemology. But such conclusions are directed against the kind of neo-Kantianism which is completely out of date, or else against an oversimplified and superficial positivism (Mach)—all the time claiming that they are making contributions to present day epistemology. It is difficult to argue with such opponents because being physicists and mathematicians they do not understand the language of philosophy and maintain that everything that cannot be expressed in their own terms is false. This is very characteristic of the situation in theoretical physics to-day, and consequently there are few philosophical advances to be made in this area, and so a real investigation with a detailed analysis must be valued more highly, even though it does not contribute very much. An example of such a work is Max Wundt's *Hegels Logik und die moderne Physik* (1946, *Universitas* i. 5). For someone acquainted with Hegel the thought is simple and illuminating: the true is not the non-contradictory, but simply that which embraces the contradiction to itself and overcomes it—but until it is thus overcome it remains inconceivable and paradoxical. Present day physics finds itself in precisely this situation with respect to its ultimate questions, and hence the insolubility, inconceivability and indefiniteness with which the problems themselves are formulated. An article by Hermann Wein, "Heutiges Verhältnis und Missverhältnis von Philosophie und Naturwissenschaft" (*Blätter für Deutsche Philosophie*, xvii, 1943) is much more specialised. He writes in sharp opposition to Heisenberg and von Weizsäcker; he never considers any of the physical theses, assumptions or conclusions drawn by the physicists, without always being aware of their metaphysical implications. He demonstrates that the ontological presuppositions of the physicists are insufficient, and in need of a fundamental revision. The most important methodological concepts depend on these presuppositions, which are mutually inter-related, namely, the conception of determination, of givenness,



of "objectivation" and of existence (in the context of mere existence for the observer). The limits of conceivability are limits of being—a definite conclusion from the rationalistic habits of thought of the positivists. Such methods have to be set in order. Other tools are required, and the beginning has already been made.

Another group of writings influenced by the natural sciences are those coming from biology. Although their actual achievements are less than the group already mentioned, the quantity is much greater. Basically they are concerned again with the old problem of vitalism, which is given new life and which gives rise to a sharp clash of opinions. One very extreme position is taken by Rudolf Woltereck in his big work, *Ontologie des Lebendigen* (two volumes, 1940). He is not content to assume a special principle of life, but maintains that so-called inorganic nature is governed by the same principle, i.e., that it also is essentially living. This thesis, which is not entirely new, is presented ingeniously and eloquently, but nevertheless fails to convince. All the factual material that is adduced is interesting, but it is irrelevant to the main thesis. Another vitalistic work is Ludwig Bertalanffy's *Theoretischen Biologie*, of which the second and especially important volume appeared in 1942. Bertalanffy is more cautious than Woltereck, commits himself to fewer metaphysical views and hence it is possible to agree with him more easily, but the philosophical interest of his work is thereby reduced. These two works are balanced by the work of the veteran protist, Max Hartmann, which appears in his *Allgemeine Biologie* (2nd ed., 1947) and in various smaller writings which include some real philosophical and methodological investigations. Hartmann emphasises strict causal process and the necessity of making a complete analysis before attempting to synthesise. Another contribution with a rich content is Jakob von Uexküll's *Bedeutungslehre* and *Der Sinn des Lebens* (1940). We have also Hans Driesch's *Biologische Problem höherer Ordnung* (1941), which rounds out the well known theses of his earlier works, although it does not make any new additions. The interesting little writing by Hans Pichler, *Das Geistvolle in der Natur* (1939) may be mentioned here. It is full of surprises, as its title suggests, but very thought-provoking and a good book for a quiet hour.

IV. *Existentialism* must also be included under the heading of metaphysics in the wider sense, although it covers all the divisions of philosophy, and is really more of a general tendency in philosophy than a division according to subject matter. Hence

the principle of division according to subject matter cannot be strictly followed here. In 1938 Karl Jaspers brought out a comprehensive introductory exposition of his basic conceptions under the title, *Existenzphilosophie*. This exposition proved to be more persuasive to those who had been previously unsympathetic than his older main work, the three volume *Philosophie*. In the same year appeared the *Untersuchungen zu einer hermeneutischen Logik* by Hans Lipps (who was shortly afterwards killed in the war). In it the influence of the Dilthey tradition appears most strongly. The problem of understanding, explanation and interpretation is the centre of interest—something which is of course only a specialised problem and one which concerns only a part of existentialism. For a wider circle of readers there is Otto Friedrich Bollnow's outline of *Existenz-philosophie* (in *Systematische Philosophie*, 1942). This is more of a general report than a direct account of his own position. Its special interest is due to the fact that it treats not only philosophy but also literature, insofar as its outlook is related, e.g., Rilke; at the same time, he traces the main lines of thought in present day existentialism back as far as Søren Kierkegaard who formulated its earliest and still most important general attitudes, concepts and expressions—including the main notion of "existence". Obviously such a broad approach could not go unchallenged, but it served to mitigate the danger of dogmatism and to make the system of concepts, which was already becoming rigid, more flexible. This service was rendered all the more necessary since Martin Heidegger's expressions had for a long time been used by everyone and were becoming a kind of jargon—due to the fact that Heidegger had been silent for so long. Heidegger's two small books, *Holderlins Hymne 'Wie wenn am Feiertage'* (1941) and *Über Platons Lehre von der Wahrheit* (1947) had not helped to counteract this tendency of making his expressions into clichés.

The latest and most important event in German philosophy is the appearance of the long awaited great work of Karl Jaspers, *Von der Wahrheit* (1948). This mighty book, 1100 pages long, is supposed to be the first volume of a philosophical logic. Of course, logic is here to be understood in its widest sense—it includes all of metaphysics and at the same time lays the foundation for all the other parts of philosophy. Briefly, it advances the outline of a whole new philosophy. This is illustrated by the way the question is formulated in terms of "truth". Truth is not conceived in the sense of some particular concept of truth or as it might be applied to the truth of some particular thesis,

but is involved in our knowledge of all that surrounds man and is suffered by him and which can neither be given nor thought as an object. Avoiding ordinary metaphysical usage, Jaspers calls this *das Umgreifende* (periechon)—that which surrounds us, enclosing us in its grasp. With this term he directs our attention to the peculiar relation that man has to it. Accordingly he places over against ontology a "periechontology" which transcends it and which is concerned with the following points: it illuminates the space in which we first encounter opposition; it attempts to explain the whole within which we find ourselves and everything else, although the explanation cannot be given in terms of objects; and it declares that a conclusion in transcendent thinking is indirect and an affair of feeling. Being is thought of as prior to all particular beings, and is itself never able to be an adequate object of thought; instead of a system of being we have a "systematic" of being. The key concept of the *Umgreifende* is the basis of everything else. We can never comprehend its essence in such a way that anything can be deduced from it. The most important thing for us is the present historical experience of being there, of ideas and of love; in these we come to ourselves. Our philosophical understanding makes this easier and even possible. But "That which we know does not exist for us as the *Umgreifende* but as the present experience of the here and now in its depths to its very sources". The illumination of the Inconceivable proceeds from its "modes". The whole truth can only reside where all of its modes are present; but since this totality is never completed, truth can never be complete and absolute in time. But the closest to it is the temporal activity itself of seeking the truth and the realisation of truth is a transient event and not something that endures in time. But the realisation of this project proves to be surprisingly rich in consequences. The phenomena of knowledge and of life give proof of this. The sources of falsehood are also exposed: its relation to evil, the kinds of mendacity (a short but brilliant chapter), misunderstanding, sophistry, and also the growth of truth, its form and the sources of true being. There are "eruptions" of truth "in nature, human life, and in philosophy" just as there are everywhere retrogressions and illusions. And truth can be realised in various forms: among these perhaps the most impressive is that of tragic literature, to which a long section is devoted. In addition to these he considers love. When the short but detailed discussion of love here is compared with Heidegger's analysis of anxiety, it is a great relief to find

that the characteristic power of man does not rest only in unhappiness and despair, but that it acquires its real meaning in the positive forms of elevated thought and self transcendence.

V. Writings in *ethics*, as well as those in the philosophies of religion, law and history, and in aesthetics—which may be taken seriously—are few in number, and hence can be treated very briefly.

The transition from existentialism can be made with a work of Otto Friedrich Bollnow, *Das Wesen der Stimmungen* (2nd ed., 1943) although it lies on the border of anthropology and metaphysics, and so cannot be unequivocally located here. However, its basic character is ethical. Bollnow gives here a very thorough treatment of an infrequently mentioned but important subject. He begins with an analysis and description of the phenomena of elevated and depressed emotional dispositions. Along with anxiety and despair are included piety, solemnity, and gaiety; in the second part of the book, even happiness becomes the centre of interest. And it is shown that in each of these dispositions it is possible to perceive a good deal of individual structure. In addition to their anthropological and moral aspects special stress is placed on their relation to time and to the consciousness of time. In ethics in a narrower sense we find two other writings of Bollnow: *Einfache Sittlichkeit* (1947) and *Die Ehrfurcht* (1947). Both of these were originally smaller articles which were expanded. "Simple morality" is a kind of spiritual skeleton which appears in the historically changing forms of higher cultures and which itself hardly changes. Good heartedness, dutifulness, sympathy, respectability all belong to it. The author contrasts simple morality with Kant's categorical imperative, which he regards as too rigorous and specialised. Simple morality, on the other hand, becomes effective at a time when such a "high ethos" has become outlived and superseded. This is because of its deeper roots and universal validity. He comes especially near to the problems of living in the second set of observations on earnestness, joy, frivolity, anger, fury, rage, selfconsciousness and weakness. The small work on "Ehrfurcht" (awe) proceeds beyond these fine analyses to the deeper levels of human moral character. It treats many different kinds of sentiment beginning with esteem and veneration, different forms of respect such as awe, and including irony, quietness and flattery. An abundance of wisdom flows from these interesting observations. Very close to this is the short but thoughtful writing by Hans Pichler, *Persönlichkeit, Glück, Schicksal* (1947), which was also partly

composed from earlier essays. It is particularly instructive in its variety of observations and the sensibility with which he traces out the true sources of a meaningful life for a present-day German. Particular attention should be drawn to the discussion of primitiveness in personality, especially in its opposition to resignation and wisdom, as much as in its relation to narrow and broadmindedness. Among the larger works only Hans Reiningers *Wertphilosophie und Ethik* (1939) can be named. This presents essentially the neo-Kantian doctrine of the moral law and is directed against "material" ethics.

Philosophy of history is represented by a shorter work at the beginning of our period by Hans Freyer's *Macchiavelli* (1938), which contains many fundamental considerations in a short space. Also Erich Rothacker's *Probleme der Kultur-anthropologie* (1942) already mentioned above has much to do with this subject. The philosophical problem of history is treated directly by Heinz Heimsoeth in his *Geschichtsphilosophie* (in *Systematische Philosophie*, 1942, 2nd ed., 1948). This book is not concerned with the writing of history or with the nature of historical knowledge but with the actual historical process itself—with the factuality of temporal processes which humanity undergoes and with the self-understanding of human life. After the downfall of the great metaphysical theories of history (Hegel), the situation in this field has become difficult. Belief in providence, and the assumption of a single dominating trend in history have disappeared, and nothing analogous can be discovered in the actual empirical happenings in the world. Without making any such assumptions he thoroughly discusses the concepts of a people (*Volk*), family of peoples, historical humanity, historical process, change, development, uniqueness and generality of events. On the latter depends the always important problem of historical prediction; all historical process "is subject to prediction whether actual or erroneous". But since the unique event is not merely a collection of general trends, one can only predict events which are close at hand and must relinquish the possibility of predicting the distant future. Prophecy by the philosophy of history is an idle claim. From this conclusion the investigation turns to the other eternal questions—such as what are the driving forces in history, the importance of historical studies, the forms of historical development and the meaning of history. Also the problem of progress and decline, is reviewed. The author does not claim to solve or even to suggest solutions for all these problems. For him it is enough to attack the many extreme theories and arguments,

and to free oneself from many of the views which they have advanced. He fulfils his task perfectly, when conceived in this limited sense. Of greater importance is Theodor Litt's *Wege und Irrwege des geschichtlichen Denkens* (1948), but it really stands on the threshold of philosophy of law. He believes that any understanding of history must depend on the political and legal conceptions of social relations—good and bad—which obtain at the moment. Consequently, the approach to a new and more correct understanding of history must be through the discovery of such contemporary conceptions. Finally, Gerhard Krüger, in his *Die Geschichte im Denken der Gegenwart* (1947), introduces religious considerations into the problem of history, and seeks to solve it by these means.

Philosophy of law is discussed by Walter Schönfeld in an extensive volume entitled *Die Geschichte der Rechtswissenschaft im Spiegel der Metaphysik* (1942). He demonstrates the complete dependence of concepts of law and of legislation on the philosophical views which dominate at the time. A completely different approach is represented by the collection of aphorisms published by Carl August Emge under the title *Diesseits und jenseits des Unrechts* (1942). This volume contains a vast quantity of material, which is not merely legal, and which is so well worked together that the apparently separable dicta become a closely knit critique of prevalent views (in particular of those accepted in Germany at the time). But at the same time it points out a new uniform and fruitful way for creative legal thought to follow. Instead of being a mere collection of references it also points out some acute problems. "Aversion to demagoguery can have the effect of excluding certain spiritual persons from important developments and thus provide a free opening for all kinds of barbarisms." "It matters a great deal whether the character of the highest in the state is merely an abbreviation of that of the masses or is instead selected from them." "Jurisprudence can always be compared to observation in atomic physics, where the subject matter to be determined is itself determined by the act of observation. Hence its complicated structure." "Since an experiment in law is obvious only when the experimenter and the laboratory are flying in the air, no continuous progress in jurisprudence is possible." This is obviously a truly philosophical book, but one which advances many problems without suggesting a solution or even attempting one. The philosophy in Theodor Litt's *Staatsgewalt und Sittlichkeit* (1944) is quite different. His treatment of the problem lacks nothing in acuteness, and with an economy of assumption

it takes the place of a prolegomena to a future philosophy of the state.

Most weakly represented is the philosophy of religion. The most important achievements in this field are to be found in the studies of Willi Hellpach mentioned above under anthropology. But more specialised than these is his *Übersicht der Religionspsychologie* (1939), in which he has collected much material and has made a provisional exposition of the problems. In a wider context we find Eduard Spranger's fine works *Die Magie der Seele* (1947) and *Weltfrommigkeit* (1941). He is concerned with rediscovering certain sources of religious life which have been ignored by mankind in our day. The author is aware that his conception of Christianity would not be approved by a theologian, but he does not write for those who already have, but rather for those that are still seeking. And he has a great deal to give to the latter, namely the demonstration of a new birth in man's inner soul.

VI. We now come to the studies in the history of philosophy. At the beginning of our period we find the publication of Immanuel Kant's *Opus Postumum* (two volumes 1938) to be the most important event. This completed the great set of Kant's works put out by the Berlin Academy (volumes xxi and xxii). The editor, Gerhard Lehmann, had spent many years on the text, although he received some assistance from the earlier work of Adickes. The two volumes do not present a single work as a whole, but are rather a loose collection of proposals and fragments, in which, however, can be seen the outline of a metaphysics based on the critique. For the reader an adequate understanding is almost insuperably difficult, and it will probably be a long time before a satisfactory evaluation of the materials can be achieved. Hence we are very grateful for the Introduction placed by the thoughtful editor at the end of the second volume, which helps us to obtain a preliminary orientation towards the text. It is evidence of the knowledge and insights derived from many long years of work on the text. These suggestions are supplemented by two indexes—a name and a subject index—as well as by the notes. At the end a chronological table of all the posthumous works is given. Four years later, the missing volume xx of Kant's works appeared. This was also edited by Lehmann, and contains many valuable fragments from the posthumous works.

A series of very interesting investigations into the evolution of the new theories of nature were made by Anneliese Maier in the following books: *Die Mechanisierung des Weltbildes im*



17. *Jahrhundert* (1938); *Das Problem der intensiven Grösse in der Scholastik (de intensione et remissione formarum)* (1939); *Die Impetustheorie der Scholastik* (1940); and *An der Grenze von Scholastik und Naturwissenschaft, Studien zur Naturphilosophie des 14. Jahrhunderts* (1943). Of these writings the first treats the results of the great developments from Galileo to Newton, the second is concerned with the little known beginnings at the end of the middle ages in connexion with one special problem; the third and fourth investigate the problems presented by the new methods to the theory of the elements, gravity and the latitude of forms. The author introduces much new material and shows very clearly the lines of development in terms of the subjects mentioned. A great deal of light is thrown on many thinkers of the later middle ages—not only on those with which we are familiar because of Duhem's work (Oresmus, Buridanus, Albert of Saxony, Marsilius of Inghen) but on many others as well. One of the new conclusions which can be drawn from these studies is that the masters of the fourteenth century had already made great advances into the new physics and had actually anticipated Galileo, although this does not detract from the value of the later insights which had to be achieved a second time.

Another surprise came from two works of Max Wundt, of which the two titles indicate that they belong together: *Die Deutsche Schulmetaphysik des 17. Jahrhunderts* (1939) and *Die Deutsche Schulphilosophie im Zeitalter der Aufklärung* (1947). The originality of this exposition consists in his emphasis on the lesser known thinkers who are forgotten to-day but at the time dominated the field and consequently are more representative of their century. The picture that results is completely different from the customary one obtained by describing only the great metaphysicians and epistemologists. A great many interesting figures appear; especially rich is the period at the turn of the seventeenth and eighteenth centuries. With this background in mind the systems of the great thinkers appear in a completely new light. Many years of hard detailed work had to be devoted to making this work possible. One can have some idea of this from looking at the list of references to the libraries in which the books by the authors treated are to be found. Of special interest is Wundt's twofold division of the history (scholasticism and enlightenment), which he makes after a thorough examination of the materials. And following on this, his division into the *genius loci* of the various German schools. In the eighteenth century this is superseded by a

division according to generations, in which individual personalities are outstanding: Christian Thomas, Franz Budde, Andreas Rüdiger are representatives of the first generation, Christian Wolff of the second, and the disciples and opponents of Wolff represent the third. We obtain a variegated and never monotonous picture, and the great expansion in philosophy at the turn of the century can now be explained in a new way.

There was no dearth of smaller specialised studies in the history of philosophy in the last ten years. Among these the periodical articles of Heinz Heimsoeth are particularly outstanding: "Zur Ontologie der Realitätsschichten in der französischen Philosophie" (*Blätter für deutsche Philosophie*, 1939), "Fichtes Systementwicklung in seinen Jenenser Vorlesungen" (*ibid.*, 1939), "Kants Philosophie des Organischen in den letzten Systementwürfen, Untersuchungen aus Anlass der vollendeten Herausgabe der Opus Postumum" (*ibid.*, 1940), "Kants philosophische Entwicklung, ein Beitrag zum Thema Metaphysik und Kritik im Kantischen Lebenswerk" (*ibid.*, 1940), "Giordano Bruno und die Deutsche Philosophie" (*ibid.*, 1942), "Zur Anthropologie Friedrich Nietzsches" (*ibid.*, 1943). Of special value are the two articles on Kant, the first of which serves as a good introduction to Kant's posthumous works, while the other is a critical appreciation of H. J. Vleeschouwer's large three-volume work on Kant (*L'évolution de la pensée Kantienne*). The article on Nietzsche is also instructive. It is not too easy to find the outlines of an anthropology in Nietzsche, and that there was one had not been appreciated very widely before. The author's eyes were first opened to it by the urgency of the problems facing mankind in the world to-day. In this respect Heimsoeth fulfils a timely need, while at the same time showing the historical position of Nietzsche as the initiator and precursor of many things which have actually happened in our day.

Very similar in method to these studies is a larger essay by Joachim Ritter "Die Stellung des Nicolaus von Cues in der Philosophiegeschichte, Grundsätzliche Probleme der neueren Cusanusforschung" (*Blätter für deutsche Philosophie*, 1939). It appeared in the modest form of a review of studies on Cusanus, but in actuality it is much more an introduction to the main problems of Cusanus's thought. He especially emphasises the relations between mathematics and metaphysics, which envelop each other in his system, and which give a completely new picture of the world. Here may also be mentioned Nicolai Hartmann's essays on Greek philosophy. They were originally lectures and are published in the Proceedings of the Prussian

Academy of Sciences: "Aristoteles und das Problem des Begriffs" (1939), "Zur Lehre vom Eidos bei Platon und Aristoteles" (1941), "Die Anfänge des Schichtungsgedankens in der Alten Philosophie" (1943), and "Die Wertdimensionen der Nikomachischen Ethik" (1944). These are historical investigations, which nevertheless modify the customary interpretations of Plato's and Aristotle's philosophy in some essential respects. The methodological key to these writings is given by the author in a general discussion of the fundamental principles of writing history of philosophy in our day: "Der philosophische Gedanke und seine Geschichte" (2nd ed., *ibid.*, 1943).

Related in their statement of the problem although along a completely different line and from a completely different point of view are Anton Meusel's *Hegel und das Problem der philosophischen Polemik* (1942), and Aloys Dempf's *Selbstkritik der Philosophie und vergleichende Philosophiegeschichte im Umriss* (1947). Along with these may also be mentioned Justus Schwarz's *Das Schöpferische im Weltbilde der Wissenschaft* (1947); and more specialised is the treatment of the problem of philosophy as such by Gerhard Krüger in *Einsicht und Leidenschaft, das Wesende Platonischen Denkens* (2nd ed., 1948), which considers the problem as exemplified in this one great thinker.

General histories of philosophy have also appeared. We can only name the two comprehensive volumes by Kurt Schilling, *Geschichte der Philosophie*: I. Band—Die alte Welt, Das germanische Mittelalter; II. Band, Die Neue Zeit (1943-4). And finally, Hans Meyer's *Geschichte der abendländischen Weltentwicklung* (three volumes, 1947-8).

## II.—SENSE-DATA AND THE PERCEPT THEORY

BY RODERICK FIRTH

### PART I

DURING the past fifty or sixty years the traditional concept of sense-datum, which has been referred to, frequently because of epistemological or ontological considerations, by many other names ("impression", "idea", "quale", "image", "sensus", "phenomenon", etc.) has been subjected to a type of phenomenological criticism which seems to threaten the foundations of a number of contemporary philosophical systems. Considering the fact that this criticism has been ably developed and formulated by such distinguished men as William James, Edmund Husserl, John Dewey, and the leading psychologists of the Gestalt School, it is rather surprising to discover how much of the current literature on epistemological problems is entirely unaffected by it. Such lack of concern with vital phenomenological issues may be merely a reflexion of ignorance on the part of epistemologists, but it is probably better construed as a manifestation of the widespread belief that epistemological problems, if they are truly epistemological, not only *can* but *should* be stated and solved in abstraction from all issues which might be classified as "psychological".

Although this lack of interest in the phenomenology of perception seems to be quite widespread among philosophers, there is a small but respectable group of epistemologists who have taken a very different stand. They have maintained, in effect, that the traditional epistemological and ontological distinctions between sense-data and physical objects have been so completely annihilated by the criticism of James, Husserl, Dewey, the Gestalt Psychologists, and others, that most of the epistemology of the last three centuries is now entirely outdated. Some of them have asserted, as I shall show later, that it is no longer possible even to believe that there *are* any sense-data in the traditional meaning of the term; others have said, perhaps more conservatively, that although sense-data do indeed *exist*, it is no longer possible to distinguish their epistemological status from that of physical objects. Despite such important differences of opinion con-

cerning the precise implications of the new phenomenology of perception, however, epistemologists who belong to this second school of thought are in complete agreement that these implications (whatever they may be) are of revolutionary importance for theory of knowledge.

It may be presumptuous to attempt to reconcile two schools of thought which have existed side by side for so many years and which have so long resisted the various forces which might have been expected to increase mutual understanding and appreciation. But the attempt is surely worth the effort, and there are grounds for believing that the differences are to a large extent the result of terminological confusions. On the one hand the critics of the traditional concept of sense-datum have frequently expressed themselves in an esoteric vocabulary which is either quite misleading or quite incomprehensible to the epistemologists. Many of the latter, on the other hand, firmly convinced that the traditional phenomenology of perception is completely adequate for the formulation and solution of philosophical problems, have not taken the trouble to seek for truth in statements of their critics which they correctly recognise to be either meaningless or absurd when interpreted in terms of the traditional vocabulary of epistemology.

In view of the nature of these obstacles to mutual understanding, I shall undertake two tasks in this paper. I shall attempt in the first part to state as clearly as possible the phenomenological theory of perception which has served as a basis for most of the recent criticism of the traditional concept of sense-datum. I shall refer to this theory as the "Percept Theory of Perception" to distinguish it from the traditional "Sense-datum Theory", and I shall limit my description of it to what I take to be the bare essentials that distinguish it from the Sense-datum Theory. To overcome the linguistic obstacles I shall make an effort to describe the Percept Theory in terms of the concepts and vocabularies of contemporary epistemologists who do *not* accept it, and I shall similarly illustrate the theory, when possible, by examples drawn from the writings of these same epistemologists. I shall then attempt, in the second part of this paper, to evaluate the claims of some of the philosophers who believe that the Percept Theory is of revolutionary importance for epistemology.<sup>1</sup>

<sup>1</sup> Much of Part I and several sections of Part II are based upon the author's doctoral dissertation, Harvard University Library.

## PART ONE

THE PHENOMENOLOGICAL BASIS  
OF THE PERCEPT THEORY

## 1. THE NATURE OF SENSE-DATA

(a) *The Definition of "Sense-Datum"*

To understand the position of those who reject the Sense-datum Theory in favour of the Percept Theory, it is necessary to consider, at least briefly, the manner in which the term "sense-datum" is customarily defined. It must be recognised, first of all, that in order to define this term philosophers have always found it necessary to refer to a certain kind of *perception* or *awareness*. Sometimes, for example, sense-data are defined as the objects of *direct* perception or of *immediate* perception. Thus at the outset of Berkeley's *Three Dialogues*, Philonous defines what he calls "sensible things" as "those only which are immediately perceived by sense".<sup>1</sup> Broad defines *sensa* as objects of which we are "directly aware" in a "perceptual situation".<sup>2</sup> Price defines sense-data as those things "directly present to consciousness" in perception.<sup>3</sup> And Moore defines sense-data as the objects of "direct apprehension", citing as an example of such apprehension the having of an after-image.<sup>4</sup> If, however, a philosopher wishes to speak without contradiction of *unsensed* sense-data, he may define sense-data as entities which *could be* directly or immediately observed. And if he wants to distinguish between a sense-datum and sense-field, he may define sense-data as the distinguishable *parts* of whatever could be observed in this manner. But in any case he makes some reference to a particular kind of observation or awareness, which he usually describes as "direct" or "immediate".

This does not mean, of course, that sense-data cannot be defined without using the word "observation" or the word "awareness"; in fact some philosophers are content to define sense-data as entities which are (or could be) *sensed*, or even as entities *given* to sense, and these definitions are merely verbal analyses of the term "sense-datum". The important point is

<sup>1</sup> Berkeley, *Three Dialogues*, in *Works*, Oxford, 1891, Vol. I, p. 381.

<sup>2</sup> C. D. Broad, *Scientific Thought*, p. 239, Kegan Paul, London, 1923.

<sup>3</sup> H. H. Price, *Perception*, p. 3, McBride, New York, 1933.

<sup>4</sup> G. E. Moore, *Philosophical Studies*, p. 173 *et seq.*, Harcourt Brace, New York, 1922, and "A Reply to My Critics", *The Philosophy of G. E. Moore*, p. 629, Northwestern U. Press, Chicago, 1942.

simply that sense-data are defined not by an enumeration of their *kinds* but rather by reference to the manner in which we become *conscious* of them. We do not say that sense-data are patches of colour, rough things and smooth things, hot things and cold things, etc., for we could never be sure of exhausting the denotation of "sense-datum" in this way. Moreover, according to some theories, the surfaces of *physical objects* can likewise be described as "patches of colour", "rough", "smooth", etc., and the question whether or not some sense-data are surfaces of physical objects should not be prejudiced or confused by our definitions. Sense-data must be defined, therefore, by reference to the manner in which we become conscious of them: they are what we feel, sense, intuit, or immediately observe, or they are what is given to us, or what we are directly aware of, in perception. And once we understand the meaning of "sense-data" as so defined, we can presumably decide to some extent by empirical observation just what *kinds* of entities are properly called "sense-data".

(b) *The Denotation of "Sense-datum"*

Nevertheless—and here we come to a matter of the greatest importance in understanding and evaluating criticisms of the Sense-datum Theory—philosophers have always found it impossible to explain the meaning of such terms as "direct awareness" and "immediate perception" without mentioning at least a few examples of the *objects* of such awareness or perception, namely, sense-data. This fact has been noticed and emphasised by Ayer and Moore. In *The Foundations of Empirical Knowledge*, Ayer points out that the terms "direct awareness" and "sense-datum" are *correlative* and that "since each of them is being used in a special, technical sense, it is not satisfactory merely to define one in terms of the other". "In order to show how one or the other of them is to be understood", therefore, it is necessary to use some other method of definition, "such as the method of giving examples".<sup>1</sup> Moore makes the same point. That special sense of the word "see", he says, "which is the visual variety of what Berkeley called 'direct perception' . . . can only be explained by giving examples of cases where 'see' is used in that sense".<sup>2</sup> It follows, therefore, that in order to understand what philosophers mean by the term

<sup>1</sup> A. J. Ayer, *The Foundations of Empirical Knowledge*, p. 61, Macmillan, New York, 1940.

<sup>2</sup> "A Reply to My Critics", in *Philosophy* of G. E. Moore, p. 628.



"sense-datum", we must supplement our analysis of whatever explicit statements they may have made on the subject, by a careful examination of the examples which they have given.

Now such an examination of the examples which contemporary philosophers have given to illustrate the meaning of the words "sense-datum" and "direct awareness", will make it quite clear that all of them who are using these words in anything like the traditional way, are in agreement on two important points. They agree, in the first place, that the sense-data directly observable by any *one* sense are quite limited in their qualities. With respect to visual perception, for example, they agree with Berkeley that it is false to say that "we immediately perceive by sight anything beside light, and colours, and figures".<sup>1</sup> Thus our sense-datum when we look at a dog, according to Russell, is "a canoid patch of colour".<sup>2</sup> And when we look at a penny stamp, according to Broad, our sensum is "a red patch of approximately square shape".<sup>3</sup> And when we look at an apple, according to Lewis, what is given is a "round, ruddy . . . somewhat".<sup>4</sup> And when we look at a tomato, according to Price, our sense-datum is "a red patch of a round and somewhat bulgy shape".<sup>5</sup> Thus it seems to be agreed by all these philosophers that when we gaze, for example, from a warm room at a distant, snow-capped mountain, our awareness of whiteness may properly be described as "direct", whereas our awareness of coldness may not. One of our sense-data is a white patch, shaped like a mountain peak, but our sensation of temperature, if we are aware of any at all, is one of warmth rather than coldness. In colloquial English, to be sure, we might say that the mountain "looks cold" or "appears cold", just as we might say that it "looks white" or "appears white"; but such language is generally supposed to be unsatisfactory for theory of knowledge because it obscures the fact that the manner in which we are conscious of whiteness in such a case is very different from the manner in which we are conscious of

<sup>1</sup> *Principles*, in *Works*, vol. I, p. 282.

<sup>2</sup> Bertrand Russell, *Inquiry into Meaning and Truth*, p. 174, Norton, New York, 1940. Quine has pointed out that Russell's word "canoid" means not "dog-shaped" but "basket-shaped". (Review of Russell's *Inquiry into Meaning and Truth*, p. 30, *Journal of Symbolic Logic*, Vol. VI, no. 1).

<sup>3</sup> C. I. Lewis, *Mind and the World-Order*, p. 119, Scribners, New York, 1929.

<sup>5</sup> *Perception*, p. 3. We may overlook for the moment the disagreement among these philosophers concerning the number of spatial dimensions possessed by visual sense-data.

coldness. The distinction in question is the very one that has traditionally been drawn by the use of such pairs of words as "impression" and "idea", "sensation" and "perception", "the given" and "the conceptual", "sense-datum" and "image", etc., and philosophers who use the term "direct awareness" in the traditional way must agree, therefore, that the sense-data directly observable by any one sense are quite limited in their qualities.

In the second place, all philosophers who use the term "direct awareness" in the traditional way will agree on a still more important point, *viz.*, that we are never directly aware of physical objects. It may seem, on first thought, that philosophers who accept the theory of perception called "direct realism", or some other more or less sophisticated variation of naïve realism, are exceptions to this rule. Closer examination of their positions will probably show, however, that what these philosophers actually maintain is that some visual and tactual sense-data—though not, of course, data of the other senses—are literally the *surfaces* of physical objects. But these "surfaces", it should be noted, are not themselves physical objects: they are *surfaces*, and differ from physical objects in that they do not occupy a volume of space. And since these direct realists admit that it is only the *surfaces* of physical objects which we can perceive directly (*i.e.*, that our sense-data are surfaces and not physical objects) we may conclude that their theory is not distinguished by any special propositions concerning the psychology of perception.

To emphasize the fact that physical objects are not accessible to direct observation, it has long been customary among philosophers and psychologists to reserve the verb "to perceive" for those cases in which the observation in question is *not* direct. According to this convention, which I shall adopt, the observing of physical objects is called "perceiving". Thus this second point of agreement among philosophers who use the correlative terms "sense-datum" and "direct awareness" in their traditional meanings, may be stated as follows: Physical objects are *perceived* but they are never the objects of *direct awareness*.

### (c) *Criticism of the Traditional Concept*

Now in view of the necessity for defining the term "sense-datum" by the method of giving examples, it is clear that not only the truth but the very *meaningfulness* of the traditional Sense-datum Theory depends on the possibility of making the distinctions involved in these two points of agreement just

formulated. Yet it is precisely these distinctions which have been denied by philosophers who accept the Percept Theory. They have sometimes developed their criticism in a rather haphazard manner, but I believe that their rejection of the Sense-datum Theory has always been based on objections to one or both of these two points of agreement.

The first objection consists in denying that there is any discoverable kind of observation or awareness which is present in every perception, and which takes as its objects *only* the kinds of things which have traditionally been offered as examples of sense-data. And this is not a trivial objection, for most advocates of the Percept Theory would go so far as to say that the experience of a man looking at a distant mountain from a warm room might comprise both whiteness and coldness, each in precisely the same manner, and neither in any other manner—a statement which, as I have pointed out, has been either explicitly or implicitly denied by all philosophers who use the term “sense-datum” in its traditional meaning.

The second objection to the Sense-datum Theory is one which is not entailed by the first but which many psychologists and philosophers regard as an essential part of the Percept Theory. This objection consists in maintaining that in fact *physical objects themselves* are observed as directly as patches of colour, odours, tastes, and other so-called “sense-data”. The direct and immediate experience of anyone who looks at the world about him, according to this interpretation of the Percept Theory, always consists of a number of full-bodied *physical objects*. And this, of course, is flatly to deny the distinction between perception and direct awareness which is essential to the Sense-datum Theory.

Now even the first of these two objections, if valid, is sufficient to necessitate a reformulation of most of the epistemological theories in the history of modern philosophy. Just how radical that reformulation would have to be, is a question which I shall discuss later. But the second objection to the Sense-datum Theory has implications which are even more serious, especially for those theories which maintain that physical objects are all, in some more or less literal sense, “composed of” sense-data (or of possible sense-data). Not only Berkeley and other subjectivists, but many more modern philosophers including Bergson, James, Russell, the new realists, and many of the pragmatists and logical positivists, have supported the view that physical objects are knowable just because they are reducible to objects of direct awareness. But if sense-data are defined as the objects of

direct awareness, and if, as some advocates of the Percept Theory have maintained, the objects of direct awareness may be *physical* objects, then physical objects are merely a subclass of sense-data. And the theory that physical objects are in some sense "composed of" sense-data is either false or tautological, of course, if it is understood that physical objects are *themselves* sense-data.

In recent years, moreover, the view that physical objects can be observed as directly as the entities which have traditionally been called "sense-data", has been used by a number of philosophers as a basis for criticizing one or more of these very epistemological positions. Wild, for example, has maintained in an article entitled "The Concept of the Given in Contemporary Philosophy", that what is actually given in perception is a "world of things". He quotes with approval a statement of Lewis that "it is indeed the thick experience of the world of things . . . which constitutes the datum for philosophical reflection", that "we do not see patches of colour, but trees and houses; we hear not indescribable sounds, but voices and violins". But then he goes on to criticize Lewis for abandoning this "classic view of the given" for the more restricted one of Berkeley and other modern empiricists. Modern empiricism, Wild asserts, "abandons the aim of classic philosophy to describe the *thick* experience of the world of things *as it is given*. Instead of this, it singles out a certain portion of the given as peculiarly accessible or *given* in some special sense".<sup>1</sup>

Reichenbach, in his *Experience and Prediction*, has also declared that physical objects are immediately given in perception and has used this as an argument against positivistic theories of "reduction". Reichenbach's position, however, is much more extreme than Wild's. According to Wild, those things that are called "sense-data" by modern epistemologists are *part* of what is given; what he objects to is the view that "the immediately given alone is given". According to Reichenbach, however, such sense-data (which he calls "impressions") are not given *at all*. "What I observe", he says, "are things, not impressions. I see tables, and houses, and thermometers, and trees, and men, and the sun, and many other things in the sphere of crude physical objects; but I have never seen my impressions of these things".<sup>2</sup>

<sup>1</sup> John Wild, *Philosophy and Phenomenological Research*, pp. 70-71, September, 1940.

<sup>2</sup> Hans Reichenbach, *Experience and Prediction*, p. 164, U. of Chicago Press, Chicago, 1938. It is interesting to observe that in *The Unity of*

Many statements of this kind have appeared in philosophical literature in recent years, and in most cases they appear to be based on the Percept Theory. The central thesis of this theory now seems to be accepted by most psychologists who are interested in the phenomenology of perception, although there are, as we shall see, differences of opinion concerning the implications of the theory. The central thesis was stated by William James in his *Principles of Psychology* as concisely, I believe, as it has ever been stated. A perception, he said, "is one state of mind or nothing"; *it does not contain a sensation.*

"We certainly ought not to say what is usually said by psychologists, and treat the perception as a sum of distinct psychic entities, the present sensation namely, *plus* a lot of images from the past, all 'integrated' together in a way impossible to describe. *The perception is one state of mind or nothing.*"<sup>1</sup>

We may look at a physical object in such a way, James admitted, that what we apprehend approaches "sensational nudity"; thus by turning a painting upside down, or looking at it with a purely æsthetic attitude, "we lose much of its meaning, but, to compensate for the loss, we feel more freshly the value of the mere tints and shadings, and become aware of the lack of purely sensible harmony or balance that it may show".<sup>2</sup> Nevertheless, the fact remains that sensations do not occur as *constituents* of perceptions, but at most only as complete and independent states of mind.

## 2. THE SENSE-DATUM THEORY

This description of perceptual consciousness differs sharply, of course, from the traditional Sense-datum Theory, which is based on a supposed distinction between *two* constituents of perceptual consciousness: (1) direct awareness of a sense-datum and (2) mediated "perception" of a physical object. There are, however, two versions of the Sense-datum Theory itself which must be distinguished in order to understand precisely what is asserted and denied by the Percept Theory: I shall refer to these two versions as the "Discursive Inference Theory" and the "Sensory Core Theory".

*Science*, Kegan Paul, London, 1934, pp. 45-48, Carnap himself had questioned what Reichenbach calls the "positivistic dogma" that impressions are given. There is a view, Carnap said, that "material things are elements of the given", and although "it is not often held to-day, it is . . . more plausible than it appears and deserves more detailed investigation".

<sup>1</sup> William James, *The Principles of Psychology*, Vol. II, p. 80, Holt, New York, 1896. Italics mine except for "*plus*".

<sup>2</sup> *Ibid.*, Vol. II, p. 81.

(a) *The Discursive Inference Theory*

The Discursive Inference Theory is most easily illustrated by turning to some of the great epistemological works of the British empirical school. In the *Essay concerning Human Understanding*, for example, Locke seems to maintain that perception is a discursive process which begins with awareness of a sense-datum and ends with the "idea" of a physical object. According to this analysis the perception of a physical object always involves a sensation and a *subsequent* act of judgement; every perception, therefore, includes awareness of a sense-datum as a *temporally distinct* act or state of consciousness. When we look at an alabaster globe, for example, the idea thereby imprinted on our mind is that of a flat circle. But knowing from experience that the cause of this appearance is a convex body, "judgment frames to itself the perception of a convex figure".<sup>1</sup> Locke admits that the transition from sense-datum to judgement "in many cases by a settled habit . . . is performed so constantly and so quick that we take that for the perception of our sensation which is an idea formed by our judgment; so that the one, viz. that of sensation, serves only to excite the other and is scarce taken notice of itself".<sup>2</sup> But he does not doubt that both the sensation and the idea of judgement always occur when we perceive a physical object and that they always occur *one after the other*.

Berkeley's analysis of perception in his *New Theory of Vision* is almost identical with Locke's. Perception is described as a process of discursive inference in which a sensation "suggests" a physical object to the observer. The mind no sooner perceives a sensation, Berkeley says, ". . . but it withal perceives the different idea of distance which was wont to be connected with that sensation". Thus, "having of a long time experienced certain ideas perceivable by touch . . . to have been connected with certain ideas of sight, I do, upon perceiving these ideas of sight, forthwith conclude what tangible ideas are like to follow".<sup>3</sup> Berkeley recognises that there are times when "we find it difficult to discriminate between the immediate and mediate objects of sight. . . . They are, as it were, most closely twisted, blended, and incorporated together".<sup>4</sup> But he does not seem to doubt that in every act of perception there are really two

<sup>1</sup> John Locke, *An Essay Concerning Human Understanding*, Vol. I, pp. 185-186, Oxford, 1894.

<sup>2</sup> *Ibid.*, p. 186.

<sup>3</sup> *New Theory of Vision*, in *Works*, Vol. I, p. 148.

<sup>4</sup> *Ibid.*, p. 151.

successive events: the occurrence of a sense-datum and the occurrence of an idea which it suggests. Like Locke, in short, he maintains the Discursive Inference Theory, although frankly admitting that the successive components of perception may sometimes be hard to distinguish.

(b) *The Sensory Core Theory*

Almost all contemporary epistemologists who accept the Sense-datum Theory, however, have rejected the discursive inference version in favour of the Sensory Core Theory. Whereas Locke and Berkeley found it merely *difficult* to distinguish a temporally distinct state of direct awareness in every perception, most contemporary psychologists and epistemologists have found it quite *impossible*. In fact many of them have concluded that perceptual consciousness is *never* a discursive process involving a preliminary state of direct awareness. An observer might report, to be sure, that on a certain occasion he was aware of a mere noise and then subsequently judged it to be an air-raid warning; but his report would probably be more accurate if he said that he first heard (in the sense of "perceived") a siren or "some sort of whistle" and then subsequently refined his judgement. The fact that a series of perceptions may become increasingly refined or determinate, in short, does not constitute proof of the existence of separate states of direct awareness. "If the content of perception is first given and then, in a later moment interpreted", says Lewis, "we have no consciousness of such a first state of intuition unqualified by thought, though we *do* observe alteration and extension of interpretation of a given content as a psychological temporal process".<sup>1</sup>

The many philosophers who support the Sensory Core Theory, therefore, do so because they believe that direct awareness of a sense-datum is a constituent of perceptual consciousness even though perceptual consciousness is not a discursive process. They believe that perceptual consciousness is a twofold state consisting of (1) direct awareness of a sense-datum and (2) an element of interpretation (variously described as "belief", "acceptance", "expectation", "judgement", etc.) and they believe that these two parts exist *simultaneously*. In perceiving an apple, for example, the sense-datum—perhaps a round, red patch—is *one part* of what is before our minds; the element of interpretation which distinguishes the perception of an apple from

<sup>1</sup> *Mind and the World-Order*, p. 66.



the perception of a tomato, is the *other*. The distinctive feature of this theory, in short, is that it regards awareness of a sense-datum as literally a *part* of perceptual consciousness, but not as a part temporally distinct.

I have called this theory of perception the "Sensory Core Theory" because it asserts that there is, in some more or less literal sense, a core of sense-data in every perception. Psychologists of the Titchenerian School are sometimes said to have believed quite literally that sense-data form a core or nucleus within every perception,<sup>1</sup> but it is possible to accept the Sensory Core Theory, as I have defined it, without committing oneself to any such topographical analysis as Titchener's. Thus Price nowhere suggests that perceptual consciousness is strictly a nucleus of sensation surrounded by a fringe of images, but he does explicitly endorse the Sensory Core Theory. Perception involves no inference, he says, nor any discursive process whatsoever: "The two states of mind, the acquaintance with a sense-datum and the perceptual consciousness [of the object] just *arise together*."<sup>2</sup> Broad also accepts the Sensory Core Theory, for with certain important qualifications concerning the nature of perceptual belief, Broad is willing to say that "in a perceptual situation we are acquainted with an objective constituent which sensuously manifests certain qualities, and that this acquaintance gives rise to and *is accompanied by* a belief that the constituent is part of a larger spatio-temporal whole of a specific kind".<sup>3</sup> Lewis has also endorsed the Sensory Core Theory by emphasising the fact that awareness of a sense-datum does not precede but *accompanies* the other constituent of perception. "Immediate awareness", he says, "is an element *in* knowledge rather than a state of mind occurring by itself or preceding conceptual interpretation".<sup>4</sup> All these philosophers, and indeed the vast majority of contemporary epistemologists, believe that sense-data are distinguishable constituents of perception, and this, of course, is the view that is specifically rejected by James and other advocates of the Percept Theory.

<sup>1</sup> "A typical perception", Titchener said, "resolves to begin with into a number of sensations . . . —the part that we may conveniently call its core or nucleus". Around this nucleus, is the context which carries the meaning, "the fringe of related processes that gathers about the central group of sensations or images". (*A Beginner's Psychology*, pp. 114, 118, Macmillan, New York, 1922.)

<sup>2</sup> *Perception*, p. 151. Italics mine.

<sup>3</sup> C. D. Broad, *The Mind and Its Place in Nature*, p. 153, Harcourt Brace, New York, 1929. Italics mine.

<sup>4</sup> *Mind and the World-Order*, p. 276.

It must be clearly understood that both the Percept Theory and the Sensory Core Theory are theories about the nature of ordinary *perceptual* states—states in which we are in some sense “conscious” of physical objects. Neither of these theories implies anything whatsoever concerning the existence of *pure* states of direct awareness—states in which we are directly aware of sense-data but *not* conscious of physical objects in the manner characteristic of ordinary perception. Contemporary philosophers seem to disagree about the frequency and even the possibility of such non-perceptual sensory states, but their opinions on this subject seem to be independent of their conclusions concerning the validity of the Percept Theory and the Sensory Core Theory. Lewis calls such states “states of pure esthesis”, and doubts whether there are any. James says that “pure sensations”, which he defines as the objects of direct acquaintance, “can only be realised in the earliest days of life. They are all but impossible to adults with memories and stores of association acquired.”<sup>1</sup> Price believes that it is possible on rare occasions only, “in a moment of intense intellectual pre-occupation”, to “pass over into the state of pure sensing, where there is not even the vaguest and most inattentive acceptance of anything material at all”.<sup>2</sup> Other philosophers, and many psychologists, however, seem to believe that pure states of sense-datum awareness are more easily obtainable, and have even said that they *must* be obtained for certain psychological and epistemological purposes.<sup>3</sup> Since the disagreements may be partly verbal, and since the issue is in any case not strictly relevant to an analysis of ordinary perceptual consciousness, I shall henceforth speak as though it were agreed that pure states of direct awareness *are* obtainable, but with the understanding that “pure” may be interpreted to mean “approximately pure”.

### 3. THE PERCEPT THEORY

#### (a) *The Unity of Perceptual Consciousness*

The thesis that ordinary perception is, as James puts it, “one state of mind or nothing”, has been systematically defended by advocates of the Percept Theory. They have tried to show that perceptual consciousness is not a twofold state by proving that all those things which are in *any* way present to

<sup>1</sup> *The Principles of Psychology*, Vol. II, p. 7.

<sup>2</sup> *Perception*, p. 165.

<sup>3</sup> This point is discussed more fully in Part II of this paper.

consciousness in perception are present in exactly the *same* way. Or, to describe their method more precisely, they have tried to show that it is impossible to discover within perception the two types of consciousness which are essential not only for the truth but for the very meaningfulness of the Sense-datum Theory. The Gestalt psychologists, in particular, deserve credit for the patient and methodical manner in which they have presented evidence against this distinction; they have begun by showing how artificial it is and have ended by presenting arguments to destroy it completely.

The Sense-datum Theory has been made particularly vulnerable to such criticism by a shift of opinion among its supporters concerning a certain phenomenological question—the question namely, whether or not we are ever directly aware of *depth* in visual perception. There are still a few contemporary epistemologists who seem to believe, along with Locke and Berkeley, that depth is a conceptual or interpretational element in visual perception; they regularly speak of visual sense-data as “patches” of colour and describe their shapes in the language of plane geometry. But among contemporary psychologists who are investigating perceptual phenomena, there seems to be general agreement that there is no phenomenological justification for making this traditional distinction between visual depth and the other two spatial dimensions. And Price, an epistemologist whose analysis of perceptual consciousness is extremely acute, says specifically that our sense-datum when we look at a tomato has “a certain visual depth”.<sup>1</sup>

From the point of view of those who defend the Percept Theory, the important fact about this shift of opinion within the older school of thought is not the manner in which the area of direct awareness is now delimited within perceptual consciousness. The important fact is that this shift of opinion represents a first step towards the recognition that in perception we are conscious of *many* qualities and relations which do not differ in their phenomenological status from those few which have traditionally been attributed to sense-data. Thus it is but one small step, as the Gestalt psychologists have shown, to the recognition that such qualities as simplicity, regularity, harmoniousness, clumsiness, gracefulness, and all the innumerable so-called “shape-qualities” can also have the same phenomenological status as colour and shape.<sup>2</sup> And it is but one small additional step from this to the

<sup>1</sup> *Perception*, p. 3.

<sup>2</sup> *Vide* W. Köhler, *Gestalt Psychology*, ch. vi, Liveright, New York, 1929.

recognition that the same holds true of qualities fittingly described by such adjectives as "reptilian", "feline", "ethereal", "substantial", and perhaps most of the adjectives in the dictionary. And this, of course, finally forces the admission that the qualities belonging to objects of direct awareness cannot be thought of as limited, in the manner traditionally assumed, by the use of one or another particular organ of sense. For it may sometimes, indeed, be quite correct to say that the experience of a man looking at a distant mountain from a warm room comprises both whiteness and coldness, each in precisely the same manner, and neither in any other manner.

John Dewey has discussed some of these phenomenological facts in his *Art as Experience* and has pointed out that they do not clash in any way with our knowledge of physiology. The organic processes which condition perceptual experience are not limited to processes in a particular sense-organ; the eye or the ear, as Dewey puts it, is "only the channel *through* which the total response takes place". Hence it should not be very surprising to discover that the so-called "visual qualities" do not always occupy a unique or central place in visual perception. "When we perceive, by means of the eyes as causal aids, the liquidity of water, the coldness of ice, the solidity of rocks, the bareness of trees in winter, it is certain that other qualities than those of the eye are conspicuous and controlling in perception. And it is as certain as anything can be that optical qualities do not stand by themselves with tactual and emotive qualities clinging to their skirts."<sup>1</sup>

Dewey's primary objective in the discussion from which these sentences are quoted is to refute what I have called the *first* point of agreement among philosophers and psychologists who accept the Sense-datum Theory; his primary objective, in other words, is to show that we cannot find within ordinary perceptual consciousness a limited set of qualities having the unique phenomenological status which has been thought to distinguish the objects of direct awareness. But Dewey's description of perceptual experience also contains an implicit criticism of the *second* point of agreement among those who accept the Sense-datum Theory, and thus serves as an introduction to the final, and perhaps most important step, in the development of the Percept Theory.

<sup>1</sup> John Dewey, *Art as Experience*, pp. 122-124, Minton Balch, New York, 1934.

(b) *The Consciousness of Ostensible Physical Objects*

The final step in the development of the Percept Theory consists in showing that the qualities of which we are conscious in perception are almost always presented to us, in some obvious sense, as the qualities of *physical objects*.<sup>1</sup> We are not conscious of liquidity, coldness, and solidity, but of the liquidity of water, the coldness of ice, and the solidity of rocks. Dewey has pointed out this phenomenological fact more explicitly in a number of other places by insisting that ordinary perceptual experience is the experience of physical nature. In *Experience and Nature*, for example, he says: "It is not experience which is experienced, but nature—stones, plants, animals, diseases, health, temperature, electricity, and so on. Things interacting in certain ways are experience: they are what is experienced."<sup>2</sup> Other philosophers and psychologists have preferred to express this fact in somewhat different terms; it is quite common, for example, to find them asserting that what is presented in perception is a "substantial whole", or a "whole physical object". Whatever the manner of expression, however, the phenomenological fact is simply that in perception we are *conscious*, in one sense of the word, of physical objects, without at the same time being conscious, in another sense of the word, of the entities which have traditionally been called "sense-data". Perception, in short, is not a twofold state; and since we *are* conscious of physical objects we cannot possibly be conscious of sense-data in the distinctive manner required by the Sense-datum Theory.

It must not be inferred, however, that James and others who deny that perception is a twofold state would not admit that there are certain types of disposition of the perceiving organism, or possibly even certain types of conscious experience, which invariably accompany our perceptual consciousness of physical objects. Such possibilities must be considered in determining the epistemological implications of the Percept Theory and will be briefly discussed in Part II of this paper, but they are irrelevant to the central thesis of the Percept Theory. For the duality denied by those who accept this theory is a duality of what we may perhaps call the *sensuous* aspects of consciousness at the moment of ordinary perception. At that moment, they maintain, we are conscious in a certain manner of a physical object

<sup>1</sup> The word "physical" is not used here, of course, in any technical sense which would limit physical objects to entities like electrons and protons which constitute the special subject-matter of physics.

<sup>2</sup> P. 42, W. W. Norton, N.Y., 1935.

which is somehow presented to us completely clothed in sensuous qualities. These qualities are presented as qualities of the object ; indeed they are in no sense abstracted or otherwise distinguished from the presented object ; and they are not limited to the qualities which have traditionally been mentioned in descriptions of sense-data. And finally, according to those who accept the Percept Theory, the sensuously clothed object is the *only* sensuous content of consciousness during ordinary perception. Sense-data, of course, if they exist as the objects of *pure* states of direct awareness, may properly be described as having sensuous qualities ; but sense-data do not occur as constituents of perceptual consciousness.

There is, of course, considerable room for disagreement about the proper way to express this conclusion. The traditional Sense-datum Theory is based on a supposed distinction between the direct awareness of sense-data and the mediated consciousness or "perception" of physical objects ; those who reject this distinction, therefore, are rejecting not only the traditional concept of sense-datum but also the theory that ordinary perception is *mediated* in some manner or other,<sup>1</sup> by the presence of sense-data. Since both aspects of the traditional distinction must stand or fall together, there is no unambiguous way in which the traditional terminology can be used to express the positive conclusions of those who accept the Percept Theory. On the one hand it is probably misleading for advocates of the Percept Theory to assert bluntly, as they frequently do, that in perception we are directly aware of physical objects. For in addition to suggesting the very distinction which the Percept Theory rejects, the word "directly", when used in such a context, may have certain epistemological connotations which are not relevant to the phenomenological issue.<sup>2</sup> On the other hand it would create an unnecessary paradox if advocates of the Percept Theory were to assert that in ordinary perceptual experience we are not directly aware of *anything* ; and this too might have confusing epistemological connotations. Consequently, even though either of these two modes of expression would be adequate if it were carefully explained, I shall avoid both of them in the following pages.

William James sometimes used the word "percept" to refer to the content of consciousness during perception ; it is this fact which has made the name "Percept Theory" seem to me appropriate for the particular theory of perceptual consciousness

<sup>1</sup> The nature of this mediation is discussed in Part II of this paper.

<sup>2</sup> This matter is discussed at length in Part II of this paper.

which he himself supported. If we were to adapt this terminology to satisfy our present need we could say that according to the Percept Theory we are presented in ordinary perception not with a sense-datum but with an "object-percept" only, and we could speak more specifically, when necessary, of "cat-percepts", "mountain percepts", etc.

For the problems to be discussed in the following pages, however, the terminology used by Price is even more convenient. Price uses the term "ostensible material object" to refer to that part of the content of perceptual consciousness which is not a sense-datum; it is thus possible to express the fact that in perception we are conscious in a certain manner of a physical object, by saying that we are presented with an ostensible physical object. Price himself does not accept the Percept Theory, but those who do may describe their position by saying that in ordinary perception we are presented with ostensible physical objects but not with sense-data.<sup>1</sup> The following passage from Price, as a matter of fact, provides a fitting conclusion for this section of the discussion, for it aptly describes the unmediated character of perceptual consciousness to which supporters of the Percept Theory have tried to draw attention. That Price could write a passage like this and still accept the Sense-datum Theory, is a mystery of the kind which the next section is intended to solve:

"Somehow it is the *whole* thing, and not just a jejune extract from it, which is before the mind from the first. From the first it is the complete material thing, with back, sides, and insides as well as front, that we 'accept', that 'ostends itself' to us, and nothing less; a thing, too, persisting through time both before and after . . . and possessed of various causal characteristics. . . . Already in this single act, even in a momentary glance, we take all these elements of the object to be there, all of them; as Mr. Joseph has said in another connection, we must not suppose that because there is only a little definite before the mind, therefore there is only a definite little."<sup>2</sup>

<sup>1</sup> This mode of expression is not intended to imply that a philosopher who accepts the Percept Theory must regard ostensible physical objects as *particulars* on analogy with sense-data as traditionally conceived. To conciliate those who prefer a position analogous to what Broad calls the "Multiple Relations Theory of Appearing" (*cf.*, *e.g.*, G. D. Hicks, *Critical Realism*, chs. 2 and 3, Macmillan, London, 1938, and W. H. F. Barnes, "The Myth of Sense-Data", *Proc. Arist. Soc.*, 1944-45) we could use a variation of the neutral terminology suggested by Broad in his *Examination of McTaggart's Philosophy*, vol. ii, p. 65, and say that perceptual experience "ostensibly manifests a physical object".

<sup>2</sup> *Perception*, pp. 151-152.



## 4. METHODOLOGICAL PROBLEMS

To most philosophers and psychologists who have rejected the Sense-datum Theory as incompatible with the real nature of perceptual consciousness, it is probably a matter for endless amazement that there is still so much resistance to their position. Contemporary epistemologists, in particular, seem to be quite unaffected by criticism of the Sense-datum Theory, although the extent of such criticism in the last fifty years has been considerable. But what makes this resistance especially difficult to understand is the fact that it has not usually taken the form of reasoned argument, but of complete indifference.

If this indifference is not to be attributed to ignorance or perversity, it is likely to suggest that there are certain fallacies or prejudices which prevent many people, and perhaps epistemologists in particular, from examining perceptual consciousness with complete objectivity. Köhler says that the Sense-datum Theory (which he calls "the meaning theory") "seems to correspond to a very natural tendency in human thinking",<sup>1</sup> and indeed some such explanation seems unavoidable to those who believe, as I do, that the Sense-datum Theory is simply not compatible with the empirical facts. In the pages immediately following, therefore, I shall discuss a number of possible errors which might account, at least in part, for the popularity of the Sense-datum Theory. Such a procedure seems likely to be more fruitful, considering the history of this issue, than further efforts to review the phenomenological evidence for the Percept Theory or to seek for more felicitous ways of describing perceptual consciousness.

(a) *The Physiological Fallacy*

It has been frequently suggested, first of all, that some of the philosophers and psychologists who accept the Sense-datum Theory have committed what is sometimes called "the physiological fallacy".<sup>2</sup> The physiological fallacy consists in assuming, *a priori*, some particular type of relationship between physiological facts and phenomenological facts. It is empirically demonstrable, for example, that the nature of particular states of perceptual consciousness is determined partly by the direct physiological effects of the stimulus, and partly by the past experience and present interests of the perceiver. But to conclude from these

<sup>1</sup> *Gestalt Psychology*, p. 83.

<sup>2</sup> The Stimulus-error and the Constancy Hypothesis are particular forms of this fallacy. *Vide* Köhler, *Gestalt Psychology*, pp. 90-97.

facts alone that there must be at least two constituents in every state of perceptual consciousness, one of them (the sense-datum) corresponding in some simple fashion to the direct physiological effects of the stimulus, would be commit the physiological fallacy and obscure the actual character of perceptual consciousness.

In reply to this fallacious form of argument, if made explicit, it would be sufficient to point out that the only way to decide a question of this sort is by direct inspection of perceptual consciousness itself. But Dewey and others have also shown that so far as our present knowledge of physiology is concerned, the Sense-datum Theory is not even favoured by considerations of elegance.<sup>1</sup>

Some philosophers have complicated the matter by actually *defining* a sense-datum as that constituent of a perception which is caused by the physical stimulus. Russell does this in his *Philosophy*, although elsewhere he accepts the conventional definition in terms of direct awareness. A sense-datum, he says in *Philosophy*, is "the core, in a perception, which is solely due to the stimulus and the sense-organ, not to past experience".<sup>2</sup> But even if we were to accept this definition, it would still remain an open question whether there *are* sense-data as so defined, and it is still true that this can be decided only by direct inspection of perceptual consciousness.

#### (b) *The Sense-datum and the Ostensible Object*

It seems quite unlikely, however, that the popularity of the Sense-datum Theory among contemporary epistemologists can be accounted for as the result of the physiological fallacy. Most epistemologists are entirely too sophisticated to commit such a fallacy, and many of them assert specifically that the Sense-datum Theory is supported by direct inspection of perceptual consciousness. It is possible, however, that some of them have committed another error by failing to distinguish clearly between a sense-datum and the *front surface* of an ostensible physical object. This possibility deserves careful consideration, for it is not uncommon to find supporters of the Sense-datum Theory, especially in conversation about this subject, attempting to localise visual sense-data on the surfaces of ostensible objects; and they do this even though they have previously maintained that sense-data may have qualities which are quite different

<sup>1</sup> *Vide, e.g., Art as Experience*, pp. 123-126.

<sup>2</sup> B. Russell, *Philosophy*, p. 204, Norton, New York, 1927.

from the surface qualities of the ostensible physical objects which accompany them.

Now if it should turn out that what a philosopher *does* mean by a visual sense-datum is nothing more nor less than the front surface of an ostensible physical object, it would follow by definition that whenever we are visually conscious of a physical object we are conscious of a sense-datum; but in that case it would no longer be correct to say that sense-data are the objects of *direct awareness*. Direct awareness is supposed to be a distinctive mode of consciousness which, as Price puts it, is "utterly different" from our consciousness of physical objects; it "arises together with" our consciousness of physical objects and is not merely a part or aspect of it. The front surface of an ostensible physical object does, to be sure, have a special status which enables us to distinguish it as the *front* surface rather than the back; it is characteristic of our perceptual consciousness that it involves, so to speak, an intrinsic "point of view".<sup>1</sup> But the Sense-datum Theory could no longer be distinguished from the Percept Theory, of course, if the assertion that perceptual consciousness includes direct awareness of a sense-datum were interpreted to mean merely that perceptual consciousness involves an intrinsic point of view.

Almost all the philosophers who accept the Sense-datum Theory, moreover, have made statements which are incompatible with the proposition that visual sense-data are the front surfaces of ostensible physical objects. Thus to clarify the relationship between sense-data and the interpretational or conceptual element in perception, they say that the latter may vary with our past experience and present attitudes even though the former remain unchanged, and that the former may change even though the latter do not vary at all.<sup>2</sup> As naïve children, for example, our awareness of a purple sense-datum when we look at a distant mountain might be accompanied by the perception of a purple mountain, whereas an exactly similar sense-datum, occurring at a later age, might be accompanied by the perception of a green mountain. And for similar reasons the sense-data produced by tomatoes in a dark cellar might vary from light grey to dark grey with changes in the illumination, although the ostensible tomatoes might at the same time remain uniformly red. According to those

<sup>1</sup> For a careful analysis of the meaning of "point of view" cf. Price, *Perception*, p. 252 *et seq.*

<sup>2</sup> Lewis, for example, says: "The same quale may be . . . the sign of different objective properties and different qualia may be the sign of the same objective property". *Mind and the World-Order*, p. 122.

who accept the Sense-datum Theory, in short, the qualities of sense-data and the qualities of ostensible physical objects can vary independently to some extent, and this implies, of course, that sense-data cannot be identified with the front surfaces of ostensible objects.

If the Sense-datum Theory were true, indeed, it would rarely, if ever, be correct to apply the same determinate adjectives both to an ostensible physical object and to the sense-datum which is presented along with it. Thus we should have to maintain that whenever we are perceiving a physical object with a surface which is ostensibly red and circular, we are also directly aware of a sense-datum which is probably elliptical in shape and which may very well be orange or purple or grey in colour. We should have to maintain, in short, that even when we look at a single physical object we are almost always conscious, though in different ways, of two colours and two shapes. To those who support the Percept Theory it seems so clear that ordinary perception is *not* characterised by any such duality, that they may perhaps be excused for suspecting that their opponents, when they actually *examine* a state of perceptual consciousness, contradict their own theory by identifying visual sense-data and the front surfaces of ostensible physical objects.

If this fallacy is committed by any of the philosophers and psychologists who accept the Sense-datum Theory, it is probably committed chiefly by those whose conception of the perceptual consciousness of physical objects is over-intellectualised. Such philosophers and psychologists are likely to conceive of perceptual consciousness as a twofold state consisting of direct awareness of a sense-datum and a *purely* intellectual or *purely* conceptual "interpretation" of this sense-datum. Our consciousness of a particular physical object in perception is consequently thought of as nothing more than a state of *belief that there exists* a physical object of a particular kind, and the special *sensuous* character of this mode of consciousness is completely overlooked.

It is easy to see that such a conception could blind one to the very phenomenological facts which would correct it, and lead to the fallacy of identifying sense-data and the front surfaces of ostensible physical objects. For even if we should decide that it is appropriate to describe our perceptual consciousness of physical objects as a kind of *belief*,<sup>1</sup> it is surely a very special kind of belief—the kind, namely, that is characterised by the presence

<sup>1</sup> On the suitability of this term, *vide* Broad, *The Mind and Its Place in Nature*, p. 153 and p. 215, and Price, *Perception*, 139-142.

of an ostensible physical object. But an ostensible physical object, as supporters of the Percept Theory have tried to point out, is presented, or appears, or "ostends itself" fully clothed in sensuous qualities. If, therefore, a philosopher or psychologist were to suppose, because he accepted *a priori* an over-intellectualised conception of perceptual consciousness, that *only* the traditional objects of direct awareness can have sensuous qualities, he could very easily fall into the error of believing that the front surface of an ostensible physical object is a sense-datum.

It is difficult to believe, however, that this error could explain the acceptance of the Sense-datum Theory by those philosophers and psychologists who show quite clearly that they are fully aware of the sensuous character of ostensible physical objects. Price, for example, has made a characteristically acute analysis of what he calls the "pseudo-intuitive" features of our perceptual consciousness of physical objects.<sup>1</sup> He criticizes those whom he calls "Rational Idealists" for their over-intellectualised conception of this mode of consciousness, and points out that it is actually very similar to direct awareness of sense-data. He quotes with approval Husserl's statement that the object of perception is "*leibhaft gegeben*", and adds that it "just comes, along with the sense-datum: it just dawns upon us, of itself".<sup>2</sup> In fact Price's only reason for refusing to say that our consciousness of physical objects is intuitive, appears to be epistemological rather than phenomenological.<sup>3</sup>

There is little doubt, therefore, that Price is fully aware of the sensuous character of ostensible physical objects. He seems to recognise that a ripe tomato hanging on a vine in the sun is "*leibhaft gegeben*" with all its sensuous qualities of redness, and smoothness, and warmth, and sweetness. Yet he would also maintain that when we look at the tomato we are ordinarily presented with *another* entity, a sense-datum, which may have qualities quite unlike those of the ostensible tomato. For those who support the Percept Theory it is difficult to see how there could be *room*, so to speak, for such conflicting sets of sensuous qualities in one and the same state of perceptual consciousness, and even Price says that in ordinary perception we "fail to distinguish" between the sense-datum and the ostensible object.<sup>4</sup> He does not seem to doubt, nevertheless, that there is a sense-datum in every perception, and a sense-datum which *can* be distinguished from the front surface of an ostensible physical object.

<sup>1</sup> *Perception*, pp. 150-156.

<sup>3</sup> *Ibid.*, p. 156.

<sup>2</sup> *Ibid.*, p. 153.

<sup>4</sup> *Ibid.*, p. 145.

(c) *Explicit and Implicit Consciousness*

This brings us finally to what is probably the most interesting explanation for the resistance which contemporary epistemologists have shown to the Percept Theory. For although it seems unlikely that careful phenomenologists like Price have committed either of the two fallacies so far discussed, Price's comment that in ordinary perception we "fail to distinguish" between the sense-datum and the ostensible physical object, does suggest that he, and perhaps others, are accepting a methodological presupposition which supporters of the Percept Theory would wish to reject. Our state of mind in perception, Price says, "is, as it were, a dreamy half-awake state, in which we are unaware of a difference between the sense-datum and the ostensible physical object".<sup>1</sup> And this naturally raises the question: How can anyone claim to *know* this particular fact about perceptual consciousness and at the same time believe that there is evidence to support the Sense-datum Theory? If it be admitted, in other words, that in perception we are *not aware* of any difference between the sense-datum and the ostensible physical object, what possible evidence could there be that both of them *are present* to consciousness during perception?<sup>2</sup>

The importance of this question is also indicated by certain passages in Broad's discussion of perceptual consciousness in *Scientific Thought*.<sup>3</sup> To illustrate what I have called "the Sensory Core Theory", Broad draws an analogy between sense-data and printed words. In reading a familiar language, he says, "what interests us as a rule is the meaning of the printed words, not the peculiarities of the print. We do not explicitly notice the latter unless there be something markedly wrong with it, such as a letter upside down. . . . In exactly the same way", he explains, "we are not as a rule interested in *sensa*". We ordinarily notice them only when they are queer, as when we see double, though "even in a normal case, we generally can detect the properties of *sensa* . . . provided that we make a special

<sup>1</sup> *Perception*, p. 168.

<sup>2</sup> This way of posing the problem avoids the difficult questions concerning the *possibility* of transcendent states of mind and unnoticed characteristics of conscious states. For three different answers to these questions, *vide* Broad, *Scientific Thought*, pp. 244-246, Lewis, *Mind and the World-Order*, p. 64, and Ayer, *The Foundations of Empirical Knowledge*, pp. 69-72, Macmillan, New York, 1940. *Vide* also Chisholm, "The Problem of the Speckled Hen", *MIND*, Vol. LI, N.S. No. 204, p. 370.

<sup>3</sup> Pp. 247-248.

effort of attention". These statements raise the same methodological question: If it be admitted that in perception we ordinarily do not "explicitly notice" *sensa*, what possible evidence could there be that we are actually conscious of them?

Now it is quite possible that statements like these just quoted from Broad and Price are the results of careful phenomenology; it is possible that these philosophers can actually discover within a single perception the two levels of consciousness suggested by their statements—a level of "explicit awareness" and a level of "implicit awareness". In that case the evidence for the fact that we are implicitly aware of sense-data in perception can be obtained by *direct inspection* of perceptual consciousness, in the very same manner, indeed, in which we would proceed to obtain evidence for the fact that we do not "explicitly notice" such sense-data or that we "fail to distinguish" them. And in that case it might be argued that the difference between the Sense-datum Theory and the Percept Theory is little more than a difference about the meaning of such expressions as "present to consciousness"; for perhaps in the limited sense designated by the word "explicitly", most of the philosophers and psychologists who accept the Sense-datum Theory would be quite willing to admit that sense-data are *not* ordinarily present to consciousness during perception.

#### (d) *Perceptual Reduction*

Most supporters of the Percept Theory, however, have made it quite clear that their opposition to the Sense-datum Theory could not be mitigated by rephrasing the issue in terms of any such verbal distinction. They have said that direct inspection of perceptual consciousness convinces them that sense-data as traditionally described are not present *at all*, thus implying that perceptual consciousness simply does not manifest the two levels suggested by the use of such expressions as "explicitly notice". There are, to be sure, various interpretations of "explicit" and "implicit" which would make these words applicable to the content of perceptual consciousness; indeed it would be surprising if there were not in view of the complexity of perceptual phenomena. But those who support the Percept Theory seem to be unanimous in their belief that direct inspection does not reveal the presence of *sense-data*, either explicitly or implicitly, within the ordinary perceptual consciousness.

It is understandable therefore, that supporters of the Percept Theory should look elsewhere for an explanation of the fact that



some philosophers and psychologists still cling to the Sense-datum Theory even though they seem to be admitting that we are not actually aware of sense-data at the moment of perception. And the explanation which naturally suggests itself is that these philosophers and psychologists would in fact admit the truth of the Percept Theory if they limited themselves to *direct inspection* of perceptual consciousness, but that they also employ *another* method, wittingly or unwittingly, in which they have greater faith.

This possibility is easily illustrated by referring to the statements I have quoted from Broad. Broad asserts, as an empirical fact, that in perception we do not explicitly notice our sense-data, just as in reading a book we do not explicitly notice the print. If this is an empirical fact, however, then Broad presumably discovered it by direct inspection of perceptual consciousness; he inspected his consciousness while reading and found that he was not explicitly noticing the print, and he inspected his consciousness during perception and found that he was not explicitly noticing sense-data. Nevertheless, Broad explains, we *can* detect the properties of the printed words by attending to the print "as in proof-reading", and we *can* similarly detect the properties of sense-data by making "a special effort of attention".

Now it is clear that the special act of "attending" by means of which we explicitly notice the print and the sense-data must be at least *somewhat* different from the act of direct inspection which, Broad admits, does not reveal the presence to consciousness of either the print or the sense-data. Any other conclusion would be self-contradictory, for if the act of "attending" were *identical* with this act of direct inspection, it would obviously be impossible for anyone to discover that we do *not* explicitly notice either the print or the sense-data. And this suggests the possibility that some of the opposition to the Percept Theory can be explained on methodological grounds. It suggests that some of the contemporary philosophers and psychologists who accept the Sense-datum Theory may believe that there is a better method of discovering phenomenological facts than the method of examining the phenomena directly. A good deal has been written on this subject, but it is still interesting and important, and deserves further attention.

The method of settling phenomenological questions which has sometimes been regarded as better than the method of direct inspection, involves a unique operation which I shall call "perceptual reduction". This operation is familiar to everyone who has participated in discussions of the traditional problems of

perception, because in such a context there is a certain use of the expression "really see" such that what we really see can be determined only by performing this operation, and not by direct inspection alone. Thus if I were asked simply what I *see* right now, I should probably reply: "A sheet of white paper"; but if I were asked what I *really* see, especially in the context of psychological or epistemological discussion, I should probably answer; "A patch of pale yellow". In the latter case I should assume that I was being asked to perform the operation of perceptual reduction *first* and *then* to describe my state of consciousness as revealed by direct inspection. And since this paper happens at the moment to be illuminated by artificial light, the answers to the two questions would, for physical and physiological reasons, be different.

The operation of perceptual reduction has two rather distinct effects when it is performed on a state of perceptual consciousness. The first of these two effects is to make the ostensible physical object progressively less and less determinate. If I were to perform the operation while looking at a tomato, for example, the ostensible tomato which is present to consciousness would, so to speak, become less specifically distinguished as an individual. Starting as a tomato with worm holes it might be reduced to a tomato with "some sort of holes" in it, and then to a tomato with spots on its surface, and so on. It might eventually become "some sort of globular object", or even just "some sort of physical thing".

But when this last stage is reached, or perhaps even before, there is a second effect: a radical change takes place and a *new* object of consciousness appears and grows more and more determinate. Our state of consciousness is approaching a pure state of sense-datum awareness, and this new object is therefore not an ostensible physical object at all but the kind of thing which is correctly called a sense-datum; and it is not until this second stage in the process has begun that we are able to describe what we "really see" and to report, for example, that we are presented with "a red patch of a round and somewhat bulgy shape". In fact the properties which we attribute to this new object of consciousness are usually incompatible with those which characterised the original ostensible physical object.

This description of the effects of the operation of perceptual reduction is undoubtedly over-simplified. Some psychologists and philosophers would probably insist that in the final stage, when we become aware of a sense-datum, we are also conscious of an extremely indeterminate physical object—that there are,

in other words, no pure states of direct awareness. Others might maintain that the process by which the final stage is reached varies considerably from one occasion to another. But so far as the present issue is concerned, the only relevant fact is that the operation of perceptual reduction *destroys* the state of perceptual consciousness on which it is performed; it is an operation, to be precise, which has the effect of *replacing* a state of perceptual consciousness by a state in which we are aware of sense-data.

It would be difficult to exaggerate the importance of the role which has been played by the operation of perceptual reduction throughout the history of modern philosophy and modern psychology. This operation reached the height of its importance in the psychological methods of Wundt, Titchener, and their followers, who declared it to be the very essence of the experimental technique of introspective psychology. They interpreted it, however, as a procedure for *cleansing* perceptual consciousness of its non-sensory constituents. They believed, as Köhler says in criticizing them, that "as psychologists our task is to separate . . . 'meanings' from the seen material as *such*, the manifold of simple sensations". They admitted that "it may be a difficult task to effect this separation and to behold the net sensations which are the actual data"; but the ability to do so, they maintained, "is precisely the special talent which transforms the layman into a psychologist".<sup>1</sup>

Now whether or not it is misleading to say that the operation of perceptual reduction is a technique for "cleansing" perceptual consciousness, it is quite certain, I believe, that this operation differs from direct inspection. And it is also quite certain that it destroys the state of perceptual consciousness on which it is performed, for when we reach the final stage in which we are aware of a sense-datum, we are no longer presented with the fairly determinate ostensible physical object which originally existed. If, therefore, any of the philosophers and psychologists who accept the Sense-datum Theory have simply failed to notice the difference between direct inspection and perceptual reduction, it is fair to say that they have committed a very serious fallacy, and one which might explain the resistance which they have offered to the Percept Theory. This fallacy is one particular form of what James called the "psychological fallacy *par excellence*"—the fallacy of reading into a state of consciousness the characteristics of something (in this case *another* state of consciousness) which is externally related to it.<sup>2</sup>

<sup>1</sup> *Gestalt Psychology*, p. 72.

<sup>2</sup> *Principles of Psychology*, pp. 196-197.

(e) *The Exposure Hypothesis*

But perhaps there are some philosophers and psychologists who believe that perceptual reduction is a legitimate method for discovering the content of perceptual consciousness, and who are nevertheless fully aware of the difference between this method and the method of direct inspection. If they recognise this difference and the fact that the two methods yield incompatible conclusions about the nature of perceptual consciousness, and if they sincerely believe that perceptual reduction is the more trustworthy method, then it is perhaps not accurate to say that they have committed a *fallacy*. They are, however, accepting a debatable *hypothesis* which ought to be carefully formulated and examined. I shall call this hypothesis the "Exposure Hypothesis".

According to the Exposure Hypothesis, the operation of perceptual reduction does not produce a state of consciousness which is simply *other than* the original state of perception on which it is performed. It produces, on the contrary, a state of direct awareness which was contained in the original perception. To put the case very simply, indeed, we might say that according to this hypothesis the only difference between the two states is that the sense-datum of which we are aware is obscured in the earlier one by the presence of an ostensible physical object. The method of perceptual reduction, therefore, is a method designed to *expose* the sense-data which are presumed to be contained in ordinary states of perceptual consciousness. This exposure is achieved, according to the hypothesis, by destroying the consciousness of physical objects which accompanies and obscures the sense-data, so that the bare sense-data themselves become accessible to subsequent acts of direct inspection.

Now to grasp the full import of the Exposure Hypothesis, it should be recognised that it grants a unique and privileged epistemological status to the particular attitude (the "reducing attitude") which we adopt in order to initiate the process of perceptual reduction. This attitude of "doubt" or "questioning" is, to be sure, an attitude of special importance to the psychologist and perhaps to the artist, but it is, on the other hand, only one among a seemingly infinite number of attitudes which we can adopt in the presence of an ostensible physical object. There are mercenary attitudes and pedagogical attitudes and martial attitudes and so on indefinitely, and each one is capable of affecting the content of perceptual consciousness; thus even though the visual stimuli are similar, for example, the qualities of a tomato as seen by a hungry child will surely be very different

from the qualities of a tomato as seen by someone looking for a missile to throw at a candidate for political office. And sometimes, moreover, such changes in attitude are consciously solicited—as for example when we revisit some favourite childhood scene and try to recapture something of its former meaning. Yet it would scarcely occur to anyone to suggest that by forcing such changes of attitude we can find, in the resulting state of perceptual consciousness, the *real but previously unobservable* content of the original state. The two states would be regarded as related to one another, to be sure, by the fact that they are caused by the same external stimulus, but the one would scarcely be taken to be a *constituent* of the other.

Those who accept the Exposure Hypothesis, therefore, have singled out one particular attitude from among the multitude which we can adopt in the presence of an ostensible physical object, and have attributed to this attitude the rare epistemological power of exposing otherwise unobservable characteristics of perceptual consciousness. And there does not appear to be the slightest empirical justification for this. If the truth of the Sense-datum Theory were assumed *a priori*, and it were *also* assumed that there is *some* procedure for discovering the sense-data within ordinary perceptual consciousness, then, indeed, it might be inferred that the reducing attitude *must* have the unique epistemological power attributed to it by the Exposure Hypothesis. But in that case, of course, the Exposure Hypothesis could not in turn be used as part of an argument to support the Sense-datum Theory. Whatever the *empirically* distinguishable features of the reducing attitude may be, they do not indicate that the operation of perceptual reduction is anything more than one method among many of substituting one state of consciousness for another.

The only argument for the Exposure Hypothesis, so far as I know, which might have some appeal to an empiricist, is the argument that to deny this hypothesis is to cast suspicion on all intellectual analysis. It is possible that Price is employing this argument, for example, when he criticizes the view "that just as dissection destroys a living organism, so intellectual analysis destroys that which is analysed, and substitutes something else in its place". According to this view, he continues, "since all thought may be regarded as analysis, we are forbidden to think"<sup>1</sup> Lewis suggests the same argument when he writes: "The given is *in*, not before experience. But the condemnation of abstractions is the condemnation of thought itself. Nothing that

<sup>1</sup> *Perception*, p. 15.

thought can ever comprise is other than some abstraction which cannot exist in isolation."<sup>1</sup>

To infer, however, that the rejection of the Exposure Hypothesis casts suspicion on intellectual analysis, or that it implicitly denies the possibility of thought, is to overlook the very distinction which criticism of the Exposure Theory is intended to clarify—the distinction, namely, between introspective reduction and direct inspection. For there is, of course, no inconsistency at all in asserting that introspective reduction is merely a process of substitution, and at the same time maintaining that there is *another* process—i.e., direct inspection—which is quite compatible with genuine intellectual analysis and which does *not* destroy the very thing which is to be analysed. "In intellectual analysis", says Price, "I do not *do* anything to the object before me. I *find* relations with it. I *discover* that it possesses various characteristics. . . . But those relations and characteristics were there before I discovered them. The only change that has occurred is a change in myself. I was ignorant and now I know."<sup>2</sup> And surely there is no reason why one who rejects the Exposure Hypothesis must deny the possibility of such a process as this.

As a matter of fact the supporters of the Percept Theory have been especially interested in *describing* the nature of perceptual consciousness, and such description requires analytical thought. The very assertion that perceptual consciousness is not a twofold state is itself the result of a kind of analytical process, and so is the more specific assertion that I am presented with an ostensible tomato clothed with certain sensuous qualities. But these assertions describe perceptual consciousness itself, as revealed by direct inspection, and not the substitute provided by the operation of perceptual reduction.

Those who accept the Sense-datum Theory have made similar distinctions in explaining their own position. They have pointed out that we cannot learn more about a particular sense-datum by changing the physical conditions of observation, for we merely frustrate ourselves if we try by such means to "get a better look" at a sense-datum. By moving our bodies, by putting on spectacles, and by turning on the light, we may indeed learn more about the stimulus-object, but if we perform these operations in order to dissect our sense-data, then indeed "we murder to dissect". And those who reject the Exposure Hypothesis are arguing analogously that we frustrate ourselves if we perform the operation of perceptual reduction in order to describe perceptual

<sup>1</sup> *Mind and the World-Order*, p. 55.

<sup>2</sup> *Perception*, p. 15.

consciousness. In neither case does the argument imply that analysis is impossible.

But if the rejection of the Exposure Hypothesis does not imply the impossibility of analysis, it is difficult to see what argument could possibly be advanced to support it. Yet the hypothesis has apparently been accepted by many philosophers and psychologists in the past, and the history of the conflict between the Sense-datum Theory and the Percept Theory suggests that it will continue to be accepted for some time to come. There may, of course, be unexpressed arguments which have not been uncovered ; and it is even possible that the three errors discussed in this section cannot account for more than a small part of what Köhler calls the "natural tendency" to favour the Sense-datum Theory. But if this is the case then those who support the Percept Theory will naturally hope that their opponents may soon provide them with a full explanation of the phenomenological or epistemological basis of the Sense-datum theory.

The next and final section of this paper is devoted to an examination of some of the epistemological implications of the Percept Theory. For many philosophers it is only the possible implications of this Theory which can give importance to the phenomenological issues which we have been discussing ; and it is not impossible that the revolutionary nature of some of the supposed implications of the Percept Theory can account in part for the resistance which it has encountered among epistemologists.

*(To be concluded.)*



### III.—FALLACIES IN MORAL PHILOSOPHY

BY S. HAMPSHIRE

1. In 1912 there appeared in *MIND* an article by the late Professor Prichard entitled "Does Moral Philosophy Rest on a Mistake?" I wish to ask the same question about contemporary moral philosophy, but to suggest different reasons for an affirmative answer. Most recent academic discussions of moral philosophy have directly or indirectly reflected the conception of the subject-matter of moral philosophy which is stated or implied in Professor Prichard's article; and this conception of the subject was in turn directly derived from Kant. Kant's influence has been so great, that it is now difficult to realise how revolutionary it was; yet I think that his main thesis, now generally accepted without question by philosophers as the starting-point of moral philosophy, had not been advocated, or even seriously entertained, by any philosopher who preceded him. I shall suggest that the *unbridgeable* separation between moral judgments and factual judgments, which Kant introduced, has had the effect, in association with certain logical assumptions, of leading philosophers away from the primary and proper questions of moral philosophy.<sup>1</sup>

What I shall summarily call the post-Kantian thesis, now so widely accepted without question, is: there is an unbridgeable logical gulf between sentences which express statements of fact and sentences which express judgments of value and particularly moral judgments; this absolute logical independence, ignored or not clearly stated by Aristotle, must be the starting-point of moral philosophy, and constitutes its peculiar problem. Post-Kantian philosophers of different logical persuasions have, of course, given very different accounts of the logic and use of value judgments; but they have generally agreed in regarding the logical independence of moral and empirical beliefs as defining the main problem of ethics.

If one reads the Nichomachean Ethics after reading the works of (for example) Professor G. E. Moore or Sir David Ross or Professor Stevenson, one has the impression of confronting a wholly different subject. The first point of difference can be

<sup>1</sup> Hume never denied that our moral judgments are based on arguments about matters of fact; he only showed that these arguments are not logically conclusive or deductive arguments.

tentatively expressed by saying that Aristotle is almost entirely concerned to analyse the problems of the moral *agent*, while most contemporary moral philosophers seem to be primarily concerned to analyse the problems of the moral *judge* or critic. Aristotle describes and analyses the processes of thought, or types of argument, which lead up to the *choice* of one course of action, or way of life, in preference to another, while most contemporary philosophers describe the arguments (or lack of arguments) which lead up to the acceptance or rejection of a moral *judgment about actions*. Aristotle's *Ethics* incidentally mentions the kind of arguments we use as spectators in justifying sentences which express moral praise and blame of actions already performed, while many contemporary moral philosophers scarcely mention any other kind of argument. Aristotle's principal question is—What sort of arguments do we use in practical deliberation about policies and courses of action and in choosing one kind of life in preference to another? What are the characteristic differences between moral and theoretical problems? The question posed by most contemporary moral philosophers seems to be—What do we mean by, and how (if at all) do we establish the truth of, sentences used to express moral judgments about our own or other people's actions?

The difference between these two approaches to the problems of moral philosophy emerges most clearly from the analogy between aesthetics and ethics to which allusion is made both in Aristotle's *Ethics* and also in most modern discussions of so-called value judgments (e.g. by Sir David Ross in 'The Right and the Good' and by Professor Ayer in 'Language, Truth and Logic'). For Aristotle (as for Plato) the aesthetic analogy which illuminates the problem of moral philosophy is the analogy between the artist or craftsman's characteristic procedures in designing and executing his work and the similar, but also different, procedures which we all use in designing and executing practical policies in ordinary life. For contemporary moral philosophers, largely preoccupied with elucidating sentences which express moral praise or blame (moral 'judgments' in the sense in which a judge gives judgments), the relevant analogy is between sentences expressing moral praise or condemnation and sentences expressing aesthetic praise or condemnation. As aesthetics has become the study of the logic and language of aesthetic *criticism*, so moral philosophy has become largely the study of the logic and language of moral criticism.

No one will be inclined to dispute that the processes of thought which are characteristic of the artist or craftsman in conceiving

and executing his designs, are essentially different from the processes of the critic who passes judgment on the artist's work ; it is notorious that the processes involved in, and the gifts and training required for, the actual making of a work of art are different from those which are required for the competent appraisal of the work ; the artist's problem is not the critic's problem. An aesthetician may choose—and in fact most modern aestheticians have chosen—to confine himself to an analysis of the characteristic arguments involved in arriving at a judgment about a work of art (theories of a special aesthetic emotion, of objective standards of taste, etc.). Alternatively he may analyse and characterise the creative process itself (theories of imagination, the relation of technique to conception, the formation of style, the nature of inspiration, etc.). He may decide that the two inquiries, though certainly distinguishable and separable, are in some respects complementary, or at least that there are some questions contained within the first which cannot be answered without a prior answer to the second. But, however complementary they may be, the first inquiry certainly does not include the second. Those who wish to distinguish more clearly the peculiar characteristics of artistic activity, will learn little or nothing from the typical aestheticians' discussions of the objective and subjective interpretations of critical aesthetic judgments. But it seems now to be generally assumed that to ask whether sentences expressing moral praise or blame are to be classified as true or false statements, or alternatively as mere expressions of feeling, is somehow a substitute for the analysis of the processes of thought by which as moral agents we decide what we ought to do and how we ought to behave. Unless this is the underlying assumption, it is difficult to understand why moral philosophers should concentrate attention primarily on the analysis of ethical terms as they are used in sentences expressing moral praise and blame ; for we are not primarily interested in moral criticism, or even self-criticism, except in so far as it is directly or indirectly an aid to the solution of practical problems, to deciding what we ought to do in particular situations or types of situation ; we do not normally perplex ourselves deeply in moral appraisal for its own sake, in allotting moral marks to ourselves or to other people. The typical moral problem is not a spectator's problem or a problem of classifying or describing conduct, but a problem of practical choice and decision.

But the aesthetic analogy may be misleading, in that the relation of the value judgments of the art critic to the character-

istic problems of the artist or craftsman cannot be assumed to be the same as the relation of the sentences expressing moral praise or blame to the problems of the moral agent.<sup>1</sup> To press the analogy would be question-begging, although the validity of the analogy between the problems of ethics and aesthetics is so often assumed. Leaving aside the analogy, the issue is—Is the answer to the question 'What are the distinguishing characteristics of sentences expressing moral praise or blame?' necessarily the same as the answer to the question 'What are the distinguishing characteristics of moral problems as they present themselves to us as practical agents?'? Unless these two questions are identical, or unless the first includes the second, much of contemporary moral philosophy is concerned with a relatively trivial side-issue, or is at the very least incomplete. My thesis is that the answer to the second question must contain the answer to the first, but that, if one tries to answer the first question without approaching it as part of the second, the answer will tend to be, not only incomplete, but positively misleading; and that the now most widely accepted philosophical interpretations of moral judgments, their logical status and peculiarities, are radically misleading for this reason. They purport to be logical characterisations of moral judgments and of the distinguishing features of moral arguments, but in these characterisations the *primary* use of moral judgments (= decisions) is largely or even entirely ignored.

2. Suppose (what probably occurs occasionally in most people's experience) one is confronted with a difficult and untrivial situation in which one is in doubt what one ought to do, and then, after full consideration of the issues involved, one arrives at a conclusion. One's conclusion, reached after deliberation, expressed in the sentence '*x* is the best thing to do in these circumstances', is a pure or primary moral judgment (the solution of a practical problem). It is misleading to the point of

<sup>1</sup> In so far as we now distinguish between the creative artist and the mere craftsman, a work of art by definition is not the answer to any problem; the artist is only said to have problems when conceived as a craftsman, that is, as having technical problems of devising means towards a given or presumed end. Where there is no problem posed, there can be no question of a right or wrong solution of it. Therefore the critic of poetry cannot be expected to show how the poem should be re-written; he describes, but he does not prescribe or make a practical judgment, as does the critic of conduct or technique. So the aesthetic analogy misleads in at least this respect; the valued critic of art excels in description and classification; he is not the artist's adviser, while moral or technical criticism is necessarily the giving of practical advice.

absurdity to describe this sentence, as used in such a context, as meaningful only in the sense in which an exclamation is meaningful, or as having no literal significance, or as having the function merely of expressing and evoking feeling. It is also misleading to describe it as a statement about the agent's feeling or attitude; for such a description suggests that the judgment would be defended, if attacked, primarily by an appeal to introspection. It is surely misleading to describe the procedure by which such a judgment or decision is established as right as one of comparing degrees of moral emotion towards alternative courses of action. I am supposing (what is normal in such cases) that the agent has reasoned and argued about the alternatives, and am asserting that he would then justify his conclusion, if it were attacked, by reference to these arguments; and a statement about his own moral feelings or attitudes would not be, within the ordinary use of language, either a necessary or sufficient justification. Therefore the characterisation of such judgments as purely, or even largely, reports of feelings or attitudes is at the least incomplete and misleadingly incomplete, because in this characterisation the typical procedures of deliberation on which the judgment is based are suppressed or ignored. It is also paradoxical and misleading to introduce the word 'intuition', as another group of post-Kantian philosophers have done, in describing the procedure by which such a judgment is arrived at, or by which it is justified and defended; for the force of the word 'intuition' is to suggest that the conclusion is not established by any recognised form of argument, by any ratiocinative process involving a succession of steps which are logically criticisable; the word 'intuition' carries the suggestion that we do not, or even cannot, deliberate and calculate in deciding what we ought to do; but we always can and often actually do deliberate and calculate.

If the procedure of practical deliberation does not conform, either in its intermediate steps or in the form of its conclusions, with any forms of argument acknowledged as respectable in logical text-books, this is a deficiency of the logical text-books. Or rather it is a mistake in the *interpretation* of text books of logic to assume that they provide, or that they are intended to provide, patterns of all forms of reasoning or argument which can properly be described as rational argument. Arguments may be, in the ordinary and wider sense, rational, without being included among the types of argument which are ordinarily studied by logicians, since logicians are generally concerned exclusively with the types of argument which are characteristic of the *a priori* and empirical

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sciences. There are other patterns of argument habitually used outside the sciences, which may be described as more or less rational in the sense that they are more or less strictly governed by recognised (though not necessarily formulated) rules of relevance. If one criticises a sequence of sentences by saying that assertion or denial of the earlier members of the sequence is irrelevant to acceptance or rejection of their successors, then this sequence is being regarded as constituting an argument. Aristotle at least remarks that not all arguments are theoretical arguments, terminating in a conclusion which is intended as a statement, either factual or logically true; there are also practical arguments—he naturally says ‘syllogisms’—the form of which is similar in many respects to some types of theoretical argument, but which are also characteristically different in their form; in particular they differ in the form of their conclusion, which is not a theoretical or true-or-false statement, but has the distinctive form of a practical judgment, *e.g.* ‘this is the right action’ or ‘this is the best thing to do’, or ‘this ought to be done’.

Even when sentences containing moral terms are used by spectators (not agents) in contexts in which they seem to be in fact associated with a purely emotional reaction to a decision or action, it is misleadingly incomplete to characterise them as having the logical force only, or largely, of expressions of, or statements about, the speaker’s or writer’s feelings or attitudes. If a purely critical and apparently emotional moral judgment of this kind is challenged and needs to be defended and justified, it will be justified by the same kind of arguments which one would have used as an agent in practical deliberation. If I am not prepared to produce such practical arguments, pointing to what ought to have been done, I shall admit that I am not making a genuine moral judgment, but merely expressing or reporting my own feelings; and I shall admit that it was misleading to use the form of sentence ordinarily associated with moral judgments, and not with expressions of feeling. Doubtless many sentences containing moral terms are ambiguous, and may be normally used both as expressions of practical judgments and as expressions of feeling; but the important point is that, if challenged about our intentions, we are required to *distinguish* between such uses; and our languages, by providing the distinctive quasi-imperative form of the practical judgment, enable us to distinguish. But moral philosophers, tacitly assuming that moral judgments must be descriptive statements, have represented a moral problem as a critic’s or spectator’s problem of proper classification and description.

If, following Aristotle, one begins by describing how moral problems differ both from technical and theoretical problems, one will have begun to answer the question about the distinctive nature of moral judgments, even in their purely critical use. But if one begins by separating them from their context in practical deliberation, and considers them as quasi-theoretical<sup>1</sup> expressions of moral praise and condemnation, the resulting characterisation of them must be misleadingly incomplete.

3. The fact that moral judgments, in spite of the peculiarity of their form as practical judgments, are established by familiar patterns of argument, has been under-emphasised by post-Kantian moral philosophers as a consequence of three connected logical doctrines: (a) the doctrine that so-called value judgments cannot be derived from factual judgments: (b) the doctrine that, although we deliberate and argue about the facts of moral situations (*e.g.* about the probable consequences of various possible actions), no further argument is possible when once the facts of the situation have been determined; we are thus left in every case of practical deliberation with (c) an ultimate moral judgment, which cannot be replaced by any statement of fact, or by an empirical statement of any kind, and which cannot itself be defended by further argument. From no consideration of facts, or accumulation of factual knowledge, can we ever deduce a moral judgment of the form 'this ought to be done' or 'this is the right action in these circumstances'. Therefore all appeal to the procedure of deliberation is irrelevant to the real problem, which is the analysis or characterisation of these *ultimate* moral judgments.

The fallacy in this position, as I have stated it, emerges in the words 'derive' and 'deduce'. It is only in limiting cases that, in describing the logic of any class of sentences of ordinary discourse, one can reasonably expect to find another class of sentences from which the problem-sentences are logically deducible. Statements about physical things cannot be deduced, or logically derived, from statements about sensations; statements about people's character or dispositions cannot be deduced, or logically derived from, statements about their behaviour; yet in both cases the truth of the first kind of statement is established exclusively by reference to the second kind. In general, one kind of sentence may be established and defended exclusively by reference to another kind, without the first kind being deducible, or logically

<sup>1</sup> To pose the problem of ethics as the problem of 'ethical predicates' or 'non-natural characteristics', is at the outset to suggest that moral judgments are to be interpreted as a peculiar kind of descriptive statement.



derivable, from the second. When as philosophers we ask how a particular kind of sentence is to be categorised or described, we are asking ourselves by what sort of arguments it is established and how we justify its use if it is disputed; to explain its logic and meaning is generally to describe and illustrate by examples the kind of sentences which are conventionally accepted as sufficient grounds for its assertion or rejection. So we may properly elucidate moral or practical judgments by saying that they are established and supported by arguments consisting of factual judgments of a particular range, while admitting that they are never strictly deducible, or in this sense logically derivable, from any set of factual judgments.

Certainly no practical judgment is logically deducible from any set of statements of fact; for if practical judgments were so deducible, they would be redundant; we could confine ourselves simply to factual or theoretical judgments; this is in effect what strict Utilitarians, such as Bentham, proposed that we should do. Bentham recommended the removal of distinctively moral terms from the language, so that moral problems would be replaced by technical problems, or problems of applied science. He made this proposal quite self-consciously and deliberately, wishing to introduce a science of morals, in which all moral problems would be experimentally decidable as technical problems. The distinctive form in which moral problems are posed and moral conclusions expressed disappears in his usage, precisely because he makes arguments about matters of fact *logically conclusive* in settling moral problems; and it is precisely to this *replacement* of moral terms that critics of strict Utilitarians have always objected (*e.g.* Professor G. E. Moore in *Principia Ethica*); they have argued that Utilitarians confuse the reasons on which moral judgments may be based with those judgments themselves; and this confusion arises from supposing that the reasons must be logically conclusive reasons, so that to accept the empirical premisses and to deny the moral conclusion is self-contradictory. But it does not follow from the fact that moral or practical judgments are not in their normal use so deducible that they must be described as ultimate, mysterious, and removed from the sphere of rational discussion. All argument is not deduction, and giving reasons in support of a judgment or statement is not necessarily, or even generally, giving logically conclusive reasons.

Once this assumption is removed, it is possible to reconsider, without philosophical prejudice, what is the difference and the relation between ordinary empirical statements and moral

judgments as we actually use them when we are arguing with ourselves, or with others, about what we ought to do. It is important to consider examples of practical or moral problems which are neither trivial in themselves nor abstractly described ; for it is only by reflecting on our procedure when confronted with what would ordinarily be called a genuine moral problem that the characteristic types of argument can be seen clearly deployed. A simplified variant of the situation presented in a recent novel<sup>1</sup> may serve the purpose. Suppose that I am convinced that if I continue to live, I cannot avoid inflicting great and indefinitely prolonged unhappiness on one or both of two people, and at the same time on myself ; by committing suicide without detection I can avoid this accumulation of unhappiness ; I therefore decide, after careful deliberation, that the right or best thing to do is to commit suicide. This is a moral judgment of the primary kind. (Having reached this conclusion, I may of course in any particular case fail to act in accordance with it ; as Aristotle points out, deciding *that x* is the best thing to do and deciding *to do x* are both distinguishable and separable.) Suppose that in this case the moral judgment, which is the conclusion of my deliberation, is challenged by someone who at the same time agrees with me in my assessment of all the facts of the situation ; that is, he agrees with me about the probable consequences of all the possible courses of action, but does not agree with my conclusion that it is right to commit suicide. An argument develops ; we each give our reasons for saying that suicide under these circumstances is right or wrong. However the argument may develop in detail, it will generally exhibit the following features. (1) Although it is assumed that my disputant agrees with me about the facts of this particular situation (probable consequences of various actions etc.), he will in his argument appeal to other facts or beliefs about the world, which are not strictly describable as beliefs about the facts of this particular situation. For instance, we might both recognise as relevant a dispute, partly empirical and partly logical, about whether there is life after death, and whether the Christian dogmas on this subject are true or significant ; or we may become involved in a largely historical argument about the social effects of suicide ; and it would be recognised as pertinent to produce psychological arguments to the effect that intense unhappiness is often preferred to mere loneliness and *therefore* (and this ' therefore ' is not the sign of an entailment) it would be better not to desert the other two people

<sup>1</sup> *The Heart of the Matter*, by Graham Greene.

involved. *The point is that it does not follow from the fact that two people are in agreement about the facts of a particular situation, but disagree in their moral judgment, that their disagreement is ultimate and admits of no further rational argument*; hence (2) our disagreement about the moral or practical conclusion, which is not a disagreement about the facts of the particular situation, is nevertheless, a disagreement to which empirical arguments, beliefs about an indefinitely wide range of matters of fact, are recognised to be relevant. If we are deliberating or arguing about whether suicide is right or wrong in these particular circumstances (or in any circumstances), then our psychological, historical and religious beliefs are always taken to be relevant parts of the argument. By representing so-called value judgments as ultimate and logically divorced from ordinary factual judgments, philosophers have implicitly or explicitly suggested that such sentences as 'suicide is always wrong' or 'suicide is wrong in these circumstances' cannot be defended or refuted by appeals to facts or to the empirical sciences. This paradox is a legacy of Kant's anxiety to underline as strongly as possible the difference between practical problems which are moral problems and those which are purely technical problems. Almost all previous philosophers—and most people without Kantian or other philosophical prejudices—have assumed accumulating knowledge, or changing beliefs arising out of the study of history, psychology, anthropology and other empirical sciences, to be relevant to their moral judgments; to be relevant, not in the sense that the falsity of moral judgments previously accepted as true can be *deduced* from some empirical propositions of history, psychology or any natural science, but in the sense in which (for example) propositions about somebody's conduct are relevant to propositions about his character; that is, previous moral judgments are shown to be groundless, the empirical propositions on which they were based having been contradicted as scientific or historical knowledge increases. The conflicting moral conclusions of a Marxist and a Christian Fundamentalist, or the differences which may arise even between two contemporary and similarly educated liberal unbelievers, will generally (but not always or necessarily) be shown in argument to rest on different empirical or at least corrigible beliefs about the constitution of the universe. Whenever we argue about any moral question which is not trivial, our beliefs and assumptions, however rudimentary and half-formulated, about psychological, sociological and probably theological questions are recognised as relevant, as logically involved in the nature of the dispute.

The result of the supposed argument about my judgment that suicide is the right policy in this particular circumstance might be that I am convinced that my judgment was wrong, and am persuaded that suicide is not the right policy. I might be persuaded to withdraw my original judgment, either because I have been made to recognise a fault in the logic of my previous argument, or because I have been persuaded to abandon admittedly relevant beliefs about matters of fact, or because my attention has been directed to new facts as being relevant to the decision, facts which I had known but the relevance of which I had previously overlooked. To direct attention to further known facts as relevant to a judgment is perhaps the most important effect and function of moral arguments or practical deliberation (*e.g.* of giving practical advice). It is misleading to speak of 'the facts of a situation' in such a way as to suggest that there must be a closed set of propositions which, once established, precisely determine the situation.<sup>1</sup> The situations in which we must act or abstain from acting, are 'open' in the sense that they cannot be uniquely described and finally circumscribed. Situations do not present themselves with their labels attached to them; if they did, practical problems would be conclusively soluble theoretical problems, the philosopher's dream; but *ἐν τῇ αἰσθήσει ἡ κρίσις*—the crux is in the labelling, or the decision depends on how we see the situation.

For these reasons the logical divorce between so-called judgments of value and factual judgments is misleading; for arguments about practical conclusions are arguments about facts. Our moral or practical judgments—'x is the right or best course of action (in these or in all circumstances)'—are corrigible by experience and observation; we feel certain about some, and very doubtful about others.

4. Certainly there may (logically) be cases in which we cannot attribute conflicting solutions of practical moral problems to conflicting beliefs about matters of fact; that is, two disputants, in giving their reasons for conflicting moral judgments, may be unable to find among their reasons any empirical proposition which is accepted by one of them and rejected by the

<sup>1</sup> The word 'fact', here as always, is treacherous, involving the old confusion between the actual situation and the description of it; the situation is given, but not 'the facts of the situation'; to state the facts is to analyse and interpret the situation. And just this is the characteristic difficulty of actual practical decisions, which disappears in the text-book cases, where the 'relevant facts' are pre-selected. So the determining arguments are cut out of the text-book, and the gap is filled by 'intuition' or feeling.

other. It is logically possible that A and B should agree entirely *e.g.* about the effects of capital punishment, and furthermore should find no relevant differences in their general psychological or sociological or other beliefs, and yet disagree as to whether capital punishment should or should not now be abolished. However rare such situations may be (and I believe them to be much more rare than is commonly allowed) such so-called 'ultimate' moral differences may occur. Both A and B, if they can claim to be making a moral judgment and not merely expressing their own feelings about, or attitudes towards, capital punishment, will be able to give the reasons which seem to them sufficient to justify their conclusion; but what is accepted by A as a sufficient reason for a practical conclusion is not accepted by B as a sufficient reason and *vice versa*. They may then argue further to ensure that each does recognise the reason which he is claiming to be sufficient in this case as sufficient in other cases; but, when this consistency of use is once established, the argument must terminate. How is such an 'ultimate' or irresolvable difference about a moral judgment properly described?

Compare this ultimate difference about the practical judgment with a similar ultimate difference about a theoretical judgment: if A and B were to disagree about whether somebody is intelligent, and yet find that they did not disagree about the facts (actual behaviour) or probabilities (how he is likely to behave under hypothetical conditions) on which their judgment is based, they would describe their difference as a difference in the use of the word 'intelligent'; they would say 'you use a different criterion of intelligence, and so do not mean by "intelligent" exactly what I mean'.<sup>1</sup> Similarly when it has been shown that A and B generally apply wholly or largely different tests in deciding whether something ought or ought not to be done, they might properly describe their so-called ultimate difference by saying that they do not both mean the same, or exactly the same, thing when they say that something ought or ought not to be done; and in most such cases of ultimate or irresolvable moral differences this is in fact what we do say—that different societies (and even different individuals within the same society)

<sup>1</sup> 'What do you mean by saying that he is intelligent?' is ordinarily interpreted as the same question as 'what are your reasons for saying or why do you say, that he is intelligent?' Similarly, 'What do you mean by saying that that was a wrong decision?' is the same question as 'Why do you say that that was a wrong decision?' To find the different reasons in different cases is to find the meaning of 'wrong', although no one set of reasons is *the* meaning.

may have more or less different moral terminologies, which are not mutually translatable. But of practical judgments one cannot say that differences which are in principle irresolvable are *simply* terminological misunderstandings and in *no* sense genuine contradictions; for it is the distinguishing characteristic of practical judgments that they have a prescriptive or quasi-imperative force as part of their meaning. There is therefore one sense in which, when A says that capital punishment ought to be abolished and B says that it ought not, they are contradicting each other; their judgments contradict each other in the sense in which two conflicting commands or recommendations may be said to contradict each other. They can only argue about which of their prescriptions is right if they can agree on some common criteria of rightness. A, following the practice of all reforming moralists and many moral philosophers, may try to influence B's actions by giving moral reasons for preferring his own criteria of use to B's use; but in his advocacy of his own use of moral terms, he will be using his moral terms in his own way. The argument might have shown B that his conclusion was wrong in A's sense of 'wrong' or even in his own sense of 'wrong'; but no argument can show that B *must* use the criteria which A uses and so much attach the same meaning (in this sense) to moral terms as A. Between two consistently applied terminologies, whether in theoretical science or in moral decision, ultimately we must simply choose; we can give reasons for our choice, but not reasons for reasons for . . . *ad infinitum*.

5. We may find that many people do not deliberate and so can scarcely be said to make moral judgments, but simply act as they have been conditioned to act, and, when challenged, repeat the moral sentences which they have been taught to repeat or merely state or express personal feelings or attitudes. A second, and much smaller class, act generally, and even wholly, on impulse, in the sense that they do not propose practical problems to themselves or choose policies, but simply do whatever they feel inclined to do—and such people are to be distinguished from those who have *decided that* to act on impulse, or to do what one feels inclined to do, is the right policy; for this is to make a moral judgment. But the great majority of people for some part of their lives are thinking about what is the best thing to do, sometimes reaching a conclusion and failing to act on it, sometimes reaching a conclusion which, in the light of corrections of their empirical beliefs or their logic, they later recognise to have been a wrong conclusion, and sometimes reaching a conclusion

which they are prepared to defend by argument and acting in accordance with it.

'Thinking what is the best thing to do' describes a procedure which it is unprofitable, if not impossible, to analyse, or find a paraphrase for, in general terms without constant reference to specific cases. Aristotle begins by describing it as calculating means to a vaguely conceived end (happiness or well-doing), the nature of the end being more precisely determined by the means chosen as involved in its realisation. But he progressively qualifies and complicates this schematic account in such a way as to suggest that to make a moral decision is not to choose means to an already decided end, but to choose a policy of means-to-end which is judged right or wrong as a whole. Practical problems are (as Kant emphasised and over-emphasised) sub-divisible into moral and purely technical problems; the choice of the most efficient means to an already determined end is not called a moral choice. It is the defining characteristic of a moral problem, that it requires an unconditional decision, the choice of an action or policy as a whole.

6. There is another and related logical fallacy, often implicitly assumed and not explicitly stated, which has led philosophers to describe moral or practical judgments as expressions or reports of feeling or as established by *a priori* intuitions, and to neglect their normal occurrence as the corrigible conclusions of arguments involving the facts of a particular situation and our general beliefs about the world; this is the fallacy of assuming that all literally significant sentences must correspond to something, or describe something. As ordinary empirical statements were said to correspond to facts, so some philosophers have introduced the word 'values' in order that there should be something to which moral (and aesthetic) judgments can be said to correspond; we are said to 'intuit' or to 'apprehend' these values, these words being used to suggest an analogy with sense-perception. Other philosophers, wishing to define the world as the totality of facts, or as the objects of sense and introspection, have inferred that, as moral judgments cannot be said to correspond to anything in the external world, they must either correspond to something in the internal world (*i.e.* to feelings) or, failing that, that they cannot be admitted to be literally significant. The question 'what do moral judgments correspond to?' or 'what do they describe?' suggests itself particularly to those who are pre-occupied with the critical use of these judgments as expressions of retrospective praise or blame; in so far as we relate them to practical deliberations and decisions, we come to recognise them



as not descriptions of, but prescriptions for, actions. Practical judgments, no less than theoretical or descriptive statements, are in the natural sense of the words, literally significant, although they do not in the normal sense describe. If I say 'this is (or would have been) the right action in these circumstances', this judgment can be significantly denied; but, as it is not a descriptive statement or statement of fact, the denial is not normally expressed in the form 'it is *false* that this is the best action in these circumstances'; 'true' and 'false' are more naturally used with theoretical judgments and statements of fact.<sup>1</sup> Of course this distinction between true or false descriptive statements and right or wrong practical judgments is not absolute and clear; many sentences are partly descriptive and are partly expressions of practical judgments. But there is a distinction which emerges clearly in simple cases of pure moral judgments and purely descriptive statements. One *can* describe somebody's behaviour or character without making any moral judgment (*i.e.* prescription), even if in fact prescriptions and descriptions are often almost inextricably combined.

7. There is (I think) a widespread impression that the concentration of academic moral philosophers on the attempt to *define* ethical expressions—'good', 'right', 'ought', etc.,—as being the principal problem of moral philosophy has tended to make the subject sterile and unenlightening. One is inclined to say that it does not *matter* whether 'right', as ordinarily used, is definable in terms of 'good' or not. There is the feeling that the clarifications which one expects from the moral philosopher cannot be answered by verbal definitions or the discovery of paraphrases. And I think this apparently philistine impatience with the search for verbal definitions or equivalences has good logical grounds. If we wish to clarify our own or somebody else's use of moral terms, the discovery of verbal equivalences or paraphrases among these terms is not an answer, but, at the most, a preliminary step towards an answer. I can become clear about what somebody means by saying 'this is the right action in these circumstances' only by finding out under what conditions he makes this judgment, and what reasons (and there may be many) he regards as sufficient to justify it. What we want to know, in clarifications of differences in our use of moral (or aesthetic) terms, is—What makes me (in the logical, not the causal sense) decide that this is the right action? There is no

<sup>1</sup> Although we can speak of believing that this is the right action we cannot speak of evidence that it is right. 'Evidence' is tied to statements which are true or false.

reason to expect a simple answer in terms of a single formula, *e.g.* 'it is likely to increase happiness'. But to search only for definitions or verbal equivalences is to assume that there must be a single sufficient reason from which I always and necessarily derive my judgment. This is another expression of the fundamental fallacy of thinking of analysis or clarification of the standard use of words or sentences as necessarily a matter of exhibiting deducibilities or entailments. If I am asked what I mean by saying of someone that he is intelligent, I explain my use of the word by describing specimens of the type of behaviour to which I apply the word; I give some specimens of the types of statements about his behaviour which would be taken as sufficient grounds for asserting or denying that he is intelligent. Similarly, one can only clarify the use of the principal moral (or aesthetic) terms—'good', 'right', 'ought', etc.—by describing specimens of conduct to which they are applied, that is, by quoting the different characteristics of actions which are normally and generally taken to be sufficient grounds for deciding that they are the right actions. The type of analysis which consists in defining, or finding synonyms for the moral terms of a particular language cannot illuminate the nature of moral decisions or practical problems; it is no more than local dictionary-making, or the elimination of redundant terms, which is useful only as a preliminary to the study of typical moral arguments. An informative treatise on ethics—or on the ethics of a particular society or person—would contain an accumulation of examples selected to illustrate the kind of decisions which are said to be right in various circumstances, and the reasons given and the arguments used in concluding that they are right. An uninformative treatise on ethics consists of specimens of moral sentences, separated from actual or imaginable contexts of argument about particular practical problems, and treated as texts for the definition of moral terms; and many academic text-books follow this pattern.

*Summary*—The four logically related fallacies underlying the typical post-Kantian approach to moral philosophy are (a) The assimilation of moral or practical judgments to descriptive statements, which is associated with concentration on the use of moral terms in sentences expressing a spectator's praise or blame; (b) the inference from the fact that moral or practical judgment cannot be logically derived from statements of fact that they cannot be based on, or established exclusively by reference to, beliefs about matters of fact; hence theories that moral judgments must be ultimate and irrational, that

they are established by intuition or are not literally significant ; (c) the assumption that all literally significant sentences must correspond to or describe something ; moral decisions do not correspond to or describe anything, but they may, nevertheless, be said to be rational or irrational, right or wrong.<sup>1</sup> (d) The confusion between clarifying the use of ethical terms with discovering definitions of, or verbal equivalences between, these terms ; the search for definitions is another expression of the old obsession of philosophers with entailment and deducibility as the only admissible relation between sentences in rational argument. To interpret 'rational argument' so narrowly is, although misleading, not in itself fallacious ; but if, on the basis of this arbitrary restriction, moral judgments are relegated to a logical limbo, labelled 'emotive', the study of the characteristic logic of these sentences, and of the types of argument in which they occur, is obscured and suppressed.

<sup>1</sup> 'I decided that  $x$  was the right thing to do' is a descriptive statement, true or false ; but ' $x$  was the right thing to do' is a practical or moral judgment, right or wrong.

## IV.—THE RIVER OF TIME

By J. J. C. SMART

THERE are certain metaphors which we commonly feel constrained to use when talking about time. We say that we are advancing through time, from the past into the future, much as a ship advances through the sea into unknown waters. Sometimes, again, we think of ourselves as stationary, watching time go by, just as we may stand on a bridge and watch leaves and sticks float down the stream underneath us. Events, we sometimes think, are like such leaves and sticks; they approach from the future, are momentarily in the present, and then recede further and further into the past. Thus instead of speaking of our advance through time we often speak of the flow of time. Sometimes we carry this line of thought further. Thus there are occasions on which we feel inclined to say that time flows at an even rate (cf. *eternity*), while there are other occasions on which we want to say that sometimes time flows faster than it does at other times. "To-day", we may say, "has just flown past. How different from yesterday when the time just seemed to crawl."

These metaphorical ways of talking are philosophically important in a way in which most metaphorical locutions are not. They are not the result of some wild flight of poetic imagination, but are, in some way, *natural* to us; at first sight, at any rate, it seems difficult to see how we could avoid them. "Time, like an ever rolling stream, bears all its sons away", says the hymn, and we feel how right the description is. "Yes", we say to ourselves, "time is like that; it is *just* like an ever rolling stream. What better description could there be?" Furthermore, these metaphors have found a place in philosophical and scientific writings. I have already alluded to Newton, and Locke defines duration as "fleeting extension". Sometimes, instead of the metaphor of the flow of time, that of our advance through time is found more congenial. Thus Eddington (*Space, Time, and Gravitation*, p. 51) says "Events do not happen; they are just there and we come across them. 'The formality of taking place' is merely the indication that the observer has on his voyage of exploration passed into the absolute future of the event in question." Similarly the philosophy of Mr. J. W. Dunne derives largely from the idea of the voyage through time.

The metaphor of time as a river which flows or a sea through which we sail is, therefore, a very natural one. Nevertheless we cannot help realising that it is a metaphor, though often we try to disguise this fact by using jargon. Sometimes, for example, it is asserted, as if it were one of the hardest of hard facts, that time is "irreversible". Now I know what it is for a car or a train to be irreversible; if ever we want it to come back to its starting point we have to send it on a circular route. Again, I understand the assertion that the flow of a river is irreversible while the flow of the tides is not. It is motion that is or is not reversible. Hence to say that *time* is irreversible is merely to elaborate our old metaphor of the flow of time. This, then, is part of our dissatisfaction with regard to time: we have a metaphor which seems inescapable even though we recognise that it is a metaphor. Still worse, when we subject it to the least scrutiny we see that it is a metaphor which is liable to lead us astray. It is suspected by even the least critical person that when we talk of time as a river which flows we are talking in a way which is somehow illegitimate. "Time a river!" we say to ourselves, "a queer sort of river that. Of what sort of liquid does it consist? Is time a liquid? A very peculiar liquid indeed!". This, moreover, is only the beginning of our troubles. We become even more worried when we ask ourselves how fast this river flows. If time is a flowing river we must think of events taking time to float down this stream, and if we say "time has flown faster to-day than it flew yesterday" we are saying that the stream flowed a greater distance to-day than it did in the same time yesterday. That is, we are postulating a second time-scale with respect to which the flow of events along the first time-dimension is measured. "To-day", "to-morrow", "yesterday", become systematically ambiguous. They may represent positions in the first time-dimension, as in "to-day I played cricket and to-morrow I shall do so again", or they may represent positions in the second time-dimension, as in "to-day time flowed faster than it did yesterday". Nor will it help matters to say that time always flows at the *same* rate. Furthermore, just as we thought of the first time-dimension as a stream, so will we want to think of the second time-dimension as a stream also; now the speed of flow of the second stream is a rate of change with respect to a third time-dimension, and so we can go on indefinitely postulating fresh streams without being any better satisfied. Sooner or later we shall have to stop thinking of time as a stream. Our difficulty, of course, is that at present we do not see very clearly just how we are to stop.

A connected point is this : with respect to motion in space it is always possible to ask "how fast is it?". An express train, for example, may be moving at 88 feet per second. The question, "How fast is it moving?" is a sensible question with a definite answer: "88 feet per second". We may not in fact know the answer, but we do at any rate know what sort of answer is required. Contrast the pseudo-question "how fast am I advancing through time?" or "How fast did time flow yesterday?". We do not know how we ought to set about answering it. What sort of measurements ought we to make? We do not even know the sort of units in which our answer should be expressed. "I am advancing through time at how many seconds per —?" we might begin, and then we should have to stop. What could possibly fill the blank? Not "seconds" surely. In that case the most we could hope for would be the not very illuminating remark that there is just one second in every second.

It is clear, then, that we cannot talk about time as a river, about the flow of time, of our advance through time, or of the irreversibility of time without being in great danger of falling into absurdity. Nevertheless, when we think of time we do visualise it as a river which flows past us or as a sea through which we sail. How else are we to think about time? Now it may well be objected that we never do think about time but only about temporal facts, that there is no such thing as time and so we can't think about it, for the word "time" is not referential in the same way as "second" is, nor either of these in the same way as "chair" is. Such an objection is, so far as it goes, perfectly sound. Our trouble is certainly due, at least in part, to our hypostatisation of time, to thinking of it as a liquid on which events float, but nevertheless just to point this out is not, by itself, to cure our perplexity. We need to go deeper into the matter. We must ask why we should be so drawn to hypostatise time in just this way; we must put to ourselves the question, "What features of our talk about temporal facts are analogous to features of our talk about rivers?"

Temporal facts are facts of before and after and of simultaneity. Now we may say, roughly, that it is events that are before and after one another or simultaneous with one another, and that events are happenings to things. Thus the traffic light changed from green to amber and then it changed from amber to red. Here are two happenings, and these happenings are changes of state of the traffic light. That is, *things* change, *events* happen. The traffic light changes, but the changing of the traffic light cannot be said to change. To say that it does or does

not change is to utter nonsense. Similarly, the traffic light neither does nor does not happen. We must also resist the temptation to misuse the word "become". The traffic light *was* green and *became* red, but the becoming red did not become. Events happen, things become, and things do not just become, they become something or other. "Become" is a transitive verb; if we start using it intransitively we can expect nothing but trouble. This is part of what is wrong with Whitehead's metaphysics; see, for example, *Process and Reality*, p. 111, where he says that actual occasions "become". Broad (*Scientific Thought*, p. 68) agrees that events do not *change* but he says that they *become*, and by this he means that they *come into existence*. Now this use of "become" is no more applicable to events than is the ordinary transitive use. Events do not come into existence; they occur or happen. "To happen" is not at all equivalent to "to come into existence" and we shall be led far astray if we use the two expressions as though they could be substituted for one another. We can say when the inauguration of a new republic occurred and we can say that the new republic came into existence then, but we cannot say that the inauguration came into existence.

With what sorts of words can we use the expressions "to change" and "to become"? In the rough statement above I answered this question by saying "*things*, not *events*, change or become different". Now while I think that if certain philosophers, notably Whitehead and McTaggart, had asked themselves this question and given themselves this rough answer, they would have saved themselves from much gratuitous metaphysics, nevertheless the answer is by no means satisfactory as it stands. It points in the right direction but it does not point clearly enough. As used thus in the abstract, "thing" and "event" are woefully vague. Just what expressions are we to count as "thing-expressions" and just what expressions are we to count as "event-expressions"? In ordinary parlance a battle is an event, for we might say that the battle of El Alamein was the decisive event of the African campaign. On the other hand a victory might be said to be an event; so also might the changing from red to green of a traffic light. This brings out how rough and ready is the usual classification of "event-expressions". "Victory" and "changing from red to green of the traffic light" have important logical properties in common which are not possessed by "battle", in some of its uses at any rate. Thus we can say "the battle became fiercer" but not "the victory became fiercer". We can indeed say, "the victory became more



probable", or "the victory became possible to foresee", but there are peculiarities about such predicates as "probable" which are too obvious to require special mention now, but which are connected with the peculiarities of some other rather special predicates, namely "past", "present", and "future", which will occupy our attention shortly. Similarly, the changing from red to green of the traffic light can not become anything or stay anything, if we rule out such things as *probable*, *imminent*, *past*, which, as I have just remarked, are somewhat peculiar. The logical grammar of "battle" in "the battle grew fiercer" has thus an analogy to that of "traffic light" in "the traffic light became green", an analogy which expressions like "change from red to green" and "victory" lack. Compare again, "journey" and "arrival". The journey can become more pleasant or more tedious, but we cannot say that the arrival did or did not become or continue to be anything. Those philosophers, then, who do their thinking in the abstract, who talk in category language about "events", "things", and "processes", and never give concrete examples, can scarcely be intelligible to us. Just what, we may ask, is an event?

Contrast "battle" with "victory", "journey" with "arrival", "running a race" with "winning a race". The contrast is one between two quite different sets of expressions; it is, roughly, the contrast which Professor Ryle has made between "task words" and "achievement words". When you have won a race you have not gone through two processes (1) running the race and (2) winning it. You have gone through one process, namely running, with the result that when you got to the end of the course no one was in front of you. You might have gone through exactly the same motions and lost it. So we must not say that "winning" is the name of a process in the way that "running" is; nor must we say either that winning is something that takes some time to perform or that it is instantaneous. The difference between winning and running is not that between a flash of lightning and a roll of thunder. In Aristotelian language, winning is an actualisation, not a process. So also are seeing and understanding as opposed to looking and trying to understand. In the *Metaphysics*, 1048 b, 30-34, Aristotle makes this very point; he contrasts "to see" and "to understand" with "to walk" and "to build". We can say that we are in the middle of a walk or of a building operation, but what should we think if someone said that he was half-way through seeing that the inkpot had fallen over or that he would soon have finished understanding a certain argument? To use Professor Ryle's

words, actualisations, unlike processes, "can be dated but not clocked".

I have drawn attention to this distinction because I think it helps to illuminate the use of expressions like "went" in "the ball went into the goal", "reached", in "the apple reached the ground", "changed" in "the traffic light changed from red to green", and "became coincident" in "the star became coincident with the cross-wire of the telescope". We should not normally say that the ball's going into the goal changed or did not change, or that the becoming coincident became or did not become anything, or that the apple's reaching the ground altered or did not alter in any way. We must compare "to change" and "to become" with "to arrive" and "to win", rather than with "to journey" and "to fight". Changes, becomings, beginnings, endings, reachings, hittings, touchings, and coincidences are like victories, arrivals, and scorings of goals, in being things to which we can give a date but not a running commentary, not even an infinitesimally short running commentary.

Changes, I have said, like arrivals and victories, neither do nor do not change. Someone may perhaps deny this, and say, "Of course changes change, and so do changes of changes, and changes of changes of changes. . . . The differential calculus is always talking of changes of changes." Let such an objector pause to think again. It is not changes of changes that change, it is *rates of changes* that change. Now "rate of change" is defined in terms of "change" but it has quite different logical properties from it. Of course one could no doubt bring up special usages in which we said that changes changed, for language is a flexible instrument and we must not expect that words will *never* be used in a certain way. For example, we could imagine an idiom in which we said "the becoming grey of his hair became much more rapid". The use of "to become grey" in this idiom stands to the use of "to become grey" in "when I met him again I was surprised to find that his hair had become grey" rather as the use of "to win" in "he was winning all the way" stands to the use of "to win" in "he won". "He was winning all the way" means some such thing as "he was in front all the way and it was quite obvious that he was going to win", i.e., it uses "to win" in a more sophisticated way than does "he won" or "he is going to win". We should have to teach a child how to use "he won" before we could teach him to understand "he was winning all the way". Similarly, such an idiom as "the becoming grey of his hair became quicker" would use

"become" in the first instantiation of this word in a more sophisticated way than it would in the second instantiation of the word, or in a more sophisticated way than does "he became enraged". I do not want to legislate as to how people should use "to change" and "to become" but I do want to invite them to become sensitive to changes of the usage of these words, because philosophers do not seem to have been so sensitive in the past. The traditional category of "event" is far too catholic.

A word like "battle" is not easy to categorise. There are certain differences between the use of "battle" in (1) "The battle of Hastings occurred on 14th October, 1066" and its use in (2) "The battle of Hastings became fiercer". For although the two uses have many similarities, in its first use "battle" is analogous to "change from red to green of the light" and "victory" in a respect in which in its second use it is analogous rather to "traffic light", *i.e.*, in the second sort of context "battle" takes on some of the properties of a substance word. This difference in use can be seen if we reflect on the statement, "The battle of Hastings occurred on 14th October, 1066 and became fiercer as the sun rose in the sky". Is there not something wrong with such a conjunction? We should want to change the sentence to something like this: "The battle of Hastings *began* on the morning of 14th October, 1066 and became fiercer as the sun rose in the sky". It may be remarked that although this change of phrasing is a change for the better, nevertheless, this is merely a stylistic matter. I want to suggest that this is not *merely* a stylistic matter, but that the stylistic propriety reflects a logical propriety.

Let us now, for our present purposes only, classify together such expressions as the following: "change" and "becoming—" (as in the traffic light example), "victory", "arrival", "coincidence of the star with the cross-wire", "impact", "starting", "stopping", and so on, and "battle" in use (1) though *not* in use (2). These all show the same logical property of not ordinarily being able to be used in conjunction with the verb "to change". They do, of course, differ in others of their logical properties; it is only for the purposes of the present paper, no doubt, that it is convenient to regard them as of one logical type. This, however, is nothing to be distressed about. All type classifications are relative only to certain purposes, though some purposes are of course more important than others. Type classifications only point out *certain* similarities of logical grammar, while they leave unmentioned differences which in other philosophical contexts, perhaps, should not be overlooked.

Most philosophers would ordinarily be quite happy to put "chair" and "table" in the same category, but these words have not, *in all respects*, quite the same logic. Thus "how large is its seat?" may intelligibly be asked about a chair but not about a table.

I may now specify the way in which I propose to use "event" by saying that all expressions of the class defined in the last paragraph are event expressions. Thus we shall say that "battle" in its use (1) is an event word while in its use (2) it is not. Again, a person's birth, death, and marriage are events, but his life is not. I think that this corresponds to *one* of the ways in which philosophers have used "event", though I do not think that they have clearly distinguished it from other, wider, ways in which they have used the word.<sup>1</sup>

If "E" is an event expression in the sense just explained, "E happened" will always be sense and, if we exclude for the moment the peculiar use of "change" whereby an event may be said to change from being future to being past, "E changed" and "E did not change" will always be nonsense. So also will "E became —" for all fillings of the blank except for the special class of fillings which consists of the words "past", "present", and "future", and of connected expressions. Nor again, can we say anything of the form "E began" or "E ended". We can say that the first world war began at midnight on 4th August, 1914, but we cannot say when the beginning of the war began, unless by "beginning of" we mean "early part of". To say anything of the form "— changed to —" or "— became —" or "— remained —" is to say that something had a certain property and later on either had another property or still had the same property. Thus an event expression will never fill the first blank of such a sentence form; what is wanted, we may say, is a *continuant* expression of some sort. In particular we cannot say that the battle of Waterloo will ever change in respect of being after the French Revolution, nor can

<sup>1</sup> By "event" some philosophers profess to mean a 4-dimensional entity, for example that of which the 3-dimensional shape of a man at any instant of his life outlines a cross-section. It is not necessary to argue in great detail that if an event (in this sense) may be said to be susceptible of change, say along the time-dimension, this is a usage very different to that in which we say "the traffic light changed". It is analogous to that in which we say "the country changes as you go north" and has nothing to do with our present puzzle at all. The country does not "really change", i.e., it does not change in the sense in which the traffic light does. It is just different in one place from what it is at another.

we say that it will not so change, for this implies that it might so change but will not in fact do so. It is not false but nonsensical to suggest that it could ever be true at one time to say that the battle was after the French Revolution and also at another time to say that it was not. McTaggart is thus very misleading when he says (*Philosophical Studies*, p. 113) "an event can never cease to be an event" and "if N is ever earlier than O and later than M, it will always be, and always has been, earlier than O and later than M". This is to say that events do not change, but my point is that they neither do nor do not change. The concept of change is just not applicable to them. McTaggart also held that Time essentially involves Change. There is, of course, a sense in which this is true, for if nothing ever became different from what it was before, if things never changed from one state to another or in their relations to one another, we could never say anything of the form "A became B before C became D" or " $x$  changed from A to B before  $y$  changed from C to D". There would be no situations in which the words "before" and "after" could be used. Nevertheless, McTaggart was wrong in proceeding from the true but un-illuminating proposition that time involves change (*i.e.* things changing) to the assertion that we can not use temporal expressions without implying that *events* change. He was hence led to attach quite the wrong sort of significance to the perfectly true statement that we *can* say that events change in respect of pastness, presentness, and futurity, *i.e.*, that a statement of the form "E became —" makes sense if we put into the blank the word "past" or "present".

It therefore behoves us now to consider the special idiom which has just been mentioned, to pay attention to the special class of expressions with which it is legitimate to form a sentence of the form "E became —" or "E changed from — to —". This class of expressions consists of the words "past", "present", and "future", and of such words as "probable" and "imminent". It is a characteristic of these words, by the way, that none of them can be used to complete the sentence-form "the traffic light became —". I shall deal only with the cases of "past", "present" and "future". The discussion of expressions such as "imminent" and "probable" would be on similar lines, though it would have to be more complex. "Past", "present", and "future" are the expressions of central importance, and they were, of course, the ones which fascinated McTaggart.

The deceptive similarities of linguistic form are those between sentences like those in class (a) and sentences like those in class (b) below :

- (a) "The traffic light was green and became red."  
 "The boat was upstream, became level with us, and then became downstream."  
 "The sea, at first was calm and later became choppy."  
 "Tommy used to be naughty, but he has quite changed now."
- (b) "The beginning of the war was future but now it is past".  
 "The changing from red to green of the light changed from being in the future to being in the past."  
 "The exploits of my youth are slipping further and further into the past."  
 "Your visit to the dentist is future but it will become past."

When we say that the boat "*was* upstream, *is* level, *will be* downstream," we are saying that occasions on which the boat is upstream are *earlier than* this utterance, that the occasion on which it is level is *simultaneous with* this utterance, and that occasions on which it is downstream are *later than* this utterance. That is, a language could be devised in which temporal copulae did not exist, but in which we used the words "earlier than", "later than", or "simultaneous with" in combination with a non-temporal copula and the expression "this utterance". This language would not contain words like "past", "present", and "future". For example "is past" would be translated by "is earlier than this utterance".

In "the boat's being upstream is earlier than this utterance; the boat's being level is simultaneous with this utterance; the boat's being downstream is later than this utterance" we have three occurrences of "this utterance" all pointing to the *same* utterance. On the other hand we cannot translate the statement, "the beginning of the war was future, is present, will be past" in the same way. If we try to do it we get: "the beginning of the war is later than some utterance earlier than this one, is simultaneous with this utterance, and is earlier than some utterance later than this one". We can only put in a simple "this utterance" once. It was once true to say "the beginning of the war is in the future" or "the beginning of the war is later than *this* utterance", i.e. if a person were to have said it he would have turned out to be right. Later on it became true to say "the beginning of the war is simultaneous with *this* utterance". Still later it becomes true to say "the beginning of the war is earlier than *this* utterance". The three "this's", however, point to different utterances.

This shows how misleading it is to think of the pastness, presentness, and futurity of events as properties, even as relational properties. It shows how utterly unlike "this event was future and became past" is to "the light was red and became green".

Substances exist in space; they are related to one another in a 3-dimensional order. Events are in time; they are related to one another in an order of earlier and later. Now if we think of events as changing, namely in respect of pastness, presentness, and futurity, we think of them as substances changing in a certain way. But if we substantialise events, we must, to preserve some semblance of consistency, spatialise time. "Earlier than" becomes "lower down the stream". It is thus easy to see how there arises the illusion of time as a river down which events float. There is a close syntactical similarity between our talk about rivers and our talk about time; *e.g.*, just as "earlier than" is transitive and asymmetrical, so is "downstream of". By our substantialising of events and our consequent spatialising of time we make this syntactical similarity still closer. Part of our language, we may say, has had its syntax "shifted", and we can, of course, go on talking in our new symbolism (with our shifted syntax) indefinitely, so long as we remain within the area in which all our central concepts are so "shifted" or distorted. Trouble arises at the boundary between our shifted system and the old one, for example, when we use "event", with its syntax shifted so as to behave like "substance", in combination with "time" with its syntax *not* shifted to behave like "space". We then get nonsense, such as "how fast do events float down the river of time?", *i.e.*, "how much time<sub>1</sub> does it take for events to float a given distance (time<sub>2</sub>) in the river?". Here "time<sub>1</sub>" is used in the ordinary way and "time<sub>2</sub>" is used in the shifted way.

Shifted syntax is an interesting linguistic phenomenon, and is at the root of most philosophical mythology. Indeed it might be useful to use "philosophical mythology" just so as to indicate this sort of mythology. This mythology is in a way harmless if, so to speak, we draw a red line round all our "shifted" talk and carefully avoid mixing it with our unshifted talk. A comparison will perhaps help to make this clear. Suppose that there are two chess players who have very weak eyesight but very retentive memories. They can, we may suppose, tell quite easily what square a piece is on, and that, *e.g.*, it has just moved diagonally, but cannot very easily distinguish its shape; they cannot tell very easily by looking at the shape of a piece whether



it is, say, a bishop or a rook. Such players might get into the habit of very often identifying pieces solely by their previous moves. They might say to themselves, for example, "this is a knight because it has just gone one place forward and one diagonally". Memory, we may thus suppose, largely makes up for deficiency in eyesight. Now suppose that the two players have been interrupted for a moment and that when they resume one takes the shadowy-looking thing, which is in reality one of his rooks, to be a bishop. He will then move it diagonally. The other player will say to himself "that's a bishop, for it came diagonally". The game may now proceed perfectly normally, though of course reference to a written record would bring to light a discontinuity, namely the "metamorphosis" of a rook into a bishop. The two players may have jumped to other conclusions also. As there cannot be three bishops they may take one bishop to be a rook. The metamorphosis of one piece leads to the metamorphosis of others. Our players may enjoy an excellent game; trouble will only arise if they suddenly look very hard at the supposed bishop and say "it's a rook", and start wanting to use it from now on once more as a rook, or if, by recourse to written records, they wish to bring the earliest part of their game into relation with the part of the game which succeeded the interruption.

When we talk about the river of time we are like these chess players. What could the chess players do? They could agree to split up the game into separate "games", and say, *e.g.*, "I had the best of the first 'game', and you had the best of the second, and the third was about evenly contested". Similarly we can draw a line round our shifted talk about the river of time, and make sure not to mix it up with our ordinary unshifted talk; this is the best thing to do when we want to enjoy a hymn like "Time, like an ever rolling stream", and there is no reason why we should not sing such a hymn with a clear logical conscience. For most purposes, however, by far the best thing is not to shift our syntax at all, to go on using our bishops as bishops and our rooks as rooks, to avoid the temptation to spatialise time or to hypostatise events.

## V.—“REVOLUTION”: AN ENQUIRY INTO THE USEFULNESS OF AN HISTORICAL TERM<sup>1</sup>

BY ARTHUR HATTO

IN a very uneven chapter on the philosophy of history<sup>2</sup> Schopenhauer observes that history's motto ought to read *eadem, sed aliter*. He considers that having read Herodotus one has read enough, that having read one history to those depths at which the unchanging nature of the human mind is disclosed, one can expect nothing save repetition: for history works with the unique and the particular, philosophy with generalities; so that philosophers on duty can have little interest in history for its own sake. Plato held a similar view to the effect that the world of change, in contrast with that of ideas, could be perceived but not understood.<sup>3</sup>

Here is the challenge. If historians are in fact unable to work with general concepts, the terminology they use can have little validity beyond the opportunist usage of everyday language. Historians and those others who are interested in history are bound to ask: what weight will Schopenhauer's assertions bear?

In making these assertions Schopenhauer was (to use an Hegelian term) reacting against the opinions of Hegel, who asserts that historians not only do but must work with general concepts. According to him, World History moves through an inevitable progression of concepts towards an inscrutable end. But so abstract a formulation requires illustration if justice is to be done to Hegel's style of thought, all the more

<sup>1</sup> The leading ideas of this article were first made public in a paper read to the Post-Graduate History Group of the School of Oriental and African Studies in February, 1948. The writer has received very generous help from his colleagues and wishes to thank once again Professor M. L. Clarke for his note on Cicero and Cicero's use of Plato and Polybius, Professor Humphreys for his note on the Latin American Republics, Mr. R. C. Latham for valuable criticism and advice in a letter and Dr. W. Rubenstein for some early Italian passages containing the word "revoluzione". The subject really called for a symposium.

<sup>2</sup> *Die Welt als Wille und Vorstellung, Ergänzungen zum dritten Buch*, Kap. 38, "Ueber die Geschichte".

<sup>3</sup> Cf. R. G. Collingwood, *The Idea of History* (1946), p. 35.

so since the difference of opinion between him and Schopenhauer is not quite so radical as might at first appear.

"Of World History (we read in Hegel's *Vorlesungen über die Philosophie der Geschichte*) it may be said that it demonstrates Mind and the manner in which Mind attains to knowledge of its own essential nature; and as the seed bears within itself the whole nature of the tree, the taste and shape of the fruit, so the first traces of Mind contain virtually the whole of history. The Orientals are as yet <sup>1</sup> unaware that Mind or Man qua Mind is essentially free; they only know that one man is free. But for that very reason such freedom is no more than caprice . . . this one man can be no more than a despot, he is no free man. The consciousness of freedom dawned for the first time on the Greeks, and accordingly they were free. But like the Romans they too only knew that some were free, not Man in general. This last was not even known by Plato and Aristotle. . . . The Germanic nations were the first to attain to consciousness in Christianity of the fact that Man in view of his nature as Man is free, and that freedom of the Mind is his essential nature."

Overlooking the aberration of this argument towards its end, we are moved to ask whether the two philosophers have as yet contradicted each other, or whether their difference is rather one of style and emphasis? <sup>2</sup> For when Hegel says that the first traces of Mind contain virtually the whole of history he is not far from Schopenhauer saying *eadem sed aliter*. But Schopenhauer stresses *eadem* and discounts *aliter*, while Hegel seems to consider that *aliter* must leave *eadem* not quite the same. Thus Schopenhauer's chief concern, even when reading history, is with Mind: whereas Hegel shifts his interest to Mentality. But unless it can be shown that the study of Mentality has no bearing on that of Mind, we cannot doubt that Hegel's shift of interest has been to the advantage both of historians and of philosophers.

Although Hegel overrates his ability to detect them, it is clear that progressions of ideas can be traced behind events both great and small. Such ideas are in the first place lodged not in the minds of the historians who study their progressions but (in their varying degrees) in the minds of those whose acts historians interpret in their histories; as Hegel asserted of

<sup>1</sup> That is, in 1840. This passage appears on p. 23 of the 1840 edn.

<sup>2</sup> A difference great enough to account for their divergent estimates of the interest and value of history and also of the unequal talent they display in interpreting it.

the Orientals, Greeks and Christian Germani in the passage quoted above. To detect and elucidate such ideas is not to formulate general laws as in scientific disciplines (which Schopenhauer says is impossible). But we are only at the beginning of the book. If we read on we find that Hegel does in fact go further. A page or two from the end, for example, he claims that "it is a false principle to think that the fetters on law and freedom can be cast off without the liberation of the conscience, that there can be a revolution without a reformation."<sup>1</sup>

This is a statement of a different order. We know from the context that Hegel is speaking of France, where he considers "the Revolution" to have been ineffectual because "the Reformation" of the catholic clergy was resisted. Yet he has leapt the gulf between the particular and the general as they are normally signalled in German by *die* and *eine*; and so now he is found in direct opposition to Schopenhauer.

Philosophers will know how to continue this argument on the philosophic plane. Indeed it was so continued there and eventually bore fruit in the works of Croce, Oakeshott and Collingwood. The writer is not equipped to meet such writers on their own ground. But the word "revolution" has caught his eye and suggested to him that as a student of language he might be able to contribute something to the discussion.

Scrutiny of the word "revolution", it seemed, might throw light on our ideas about "historical process", linked as it is with others such as "reformation", "evolution", "reaction" and "rebellion", which lend to history that appearance of movement which mere chronicles lack though they be chockful of events. It is surely to such words and their connotations that we owe our sense of a great drama unfolding in one unbroken tissue of causes and effects, whereas the chronicle presents us with a stammering tale of one thing after another, like those imagined by E. M. Forster at Stone Age firesides, elicited from the narrator by the endless repetition of the question "... and then?" and the menace of a half-gnawed bone.<sup>2</sup>

Having come to this conclusion, that the dynamic word "revolution" would repay study, the writer was not surprised to discover that R. G. Collingwood had been there before him, nor that a neo-Hegelian constitutional historian E. Rosenstock had gone over some of the ground in the modern period more thoroughly and drawn similar inferences (though not with

<sup>1</sup> *Op. cit.*, p. 542.

<sup>2</sup> In *Aspects of the Novel*.

quite the same aim in view as his own).<sup>1</sup> But despite this important earlier work he will tell his story as he told it when first invited to read a paper to the Post-Graduate History Group of the School of Oriental and African Studies and bring these and other authorities into it where they help him, and not pick up their threads where they left them.

## (i)

Though the Greeks had their fill of revolution they had no single word for it. Herodotus and Thucydides speak of *ἐπανάστασις* 'uprising'.<sup>2</sup> Thucydides further speaks of *μεταβολή πολιτείας* 'change of constitution'<sup>3</sup> or of *νεωτερίζειν τὴν πολιτείαν* 'to revolutionize the state'.<sup>4</sup> In his *Republic* Plato also uses the word *νεωτερίζειν*,<sup>5</sup> in the sense of entertaining revolutionary designs, while the noun *νεωτερισμός*, which appears in an earlier passage means 'revolution'.<sup>6</sup> Still, Plato does not stick to the one word but also uses *μεταβολή* 'change', as (loosely) in . . . *μεταβολῆς ἐκ προστάτου ἐπὶ τύραννον* 'change from a protector into a tyrant' (the men standing for the types of government they head).<sup>7</sup> Of verbal phrases used by Plato the following may be noted: *ἐκ δημοκρατίας μεταβάλλει* 'is a transformation of democracy'<sup>8</sup> and *τὴν πολιτείαν μεθίστησί* 'revolutionizes the state'.<sup>9</sup> But caution is needed here, since there is an element of determinism in Plato's conception; for if his ideal state tends to deteriorate into a timocracy and a timocracy into an oligarchy and so on through democracy into tyranny,<sup>10</sup> the process might just as well be called evolution as revolution, an ambiguity which threatens modern historians the more successfully they strive to interpret history as a tissue of causes and effects. Plato did not himself complete the cycle by making tyranny pass into an ideal state again:<sup>11</sup> that was left to Polybius, in whose work we accordingly meet revolution (*ἀνακύκλωσις*) in another sense—that of a slowly turning wheel. And, be it noted, the force behind its turning is Fortune (*τύχη*).<sup>12</sup> Here, alleging that he

<sup>1</sup> *Revolution als neuzeitlicher Begriff*, in *Festgabe Heilborn (Abhandlungen der Schlesischen Gesellschaft für Vaterländische Cultur Geisteswiss. Reihe, Heft 5 (1931))*. 'Die Geschichte des Wortes "Revolution" ist also ein rechtsgeschichtliches Problem'.

<sup>2</sup> Herodotus, 3.44; Thucydides, 2.27.

<sup>3</sup> Thuc., 6.17.

<sup>4</sup> *Ibid.*, 1.115.

<sup>5</sup> 565 B.

<sup>6</sup> 555 E.

<sup>7</sup> 565 D.

<sup>8</sup> 562 A.

<sup>9</sup> 562 C.

<sup>10</sup> *Rep.*, Book VIII.

<sup>11</sup> Cf. E. Barker, *Greek Political Theory* (1918), p. 260.

<sup>12</sup> Cf. Collingwood, *op. cit.*, p. 36.

is giving his busy readers a conveniently brief account of what Plato has said, Polybius makes kingship pass into tyranny, tyranny into aristocracy, aristocracy into oligarchy, oligarchy into democracy, democracy into mob-rule and mob-rule into that state of nature which (as the Admirable Crichton also held) must inevitably produce kingship, and a new cycle. *Αὕτη πολιτειῶν ἀνακύκλωσις, αὕτη φύσεως οἰκονομία, καθ' ἣν μεταβάλλει καὶ μεθίσταται καὶ πάλιν εἰς αὐτὰ καταντᾷ τὰ κατὰ τὰς πολιτείας*, says Polybius: 'Such is the cycle of political revolution, the course appointed by nature in which constitutions change, disappear and finally return to the point from which they started'.<sup>1</sup> Polybius also makes use of the expression *μεταβολῆς τῶν πολιτειῶν* 'transformation of constitutions'.<sup>2</sup>

A more empirical approach is found in Aristotle's *Politics*, where he expressly rejects Plato's cyclic theory of revolutions.<sup>3</sup> As in so many other things he was a collector and connoisseur of constitutions, which he studied with a prime regard to their stability. His regular term for "revolution" is *μεταβολή καὶ στάσις* 'change with uprising', or where violence is absent, plain *μεταβολή*. Aristotle invariably adopts the point of view of the constitution threatened with change, even when it is of a kind repugnant to him, a method in which he was followed by Macchiavelli, though we must assume that in Aristotle's case the reason was pedagogical, not professional or even "artistic" like the Italian's. Great as is Aristotle's debt to Plato<sup>4</sup> it must be conceded that his notions of how the various types of constitutions—monarchies, tyrannies, timocracies, aristocracies, plutocracies, democracies and the well-balanced "polities"—might turn, be turned or be saved from turning from one into another, were far more detailed and realistic than Plato's, or Polybius's (who had had the benefit of the *Politics* and several additional centuries of happening both within and without the Roman Republic). Although Aristotle confines his analysis to the two phases of "before" and "after" he says more than enough to convince us that he saw deeply into what we call historic process and the stuff of which revolutions are made. The only revolution that is conspicuous by its absence is the one which his famous pupil Alexander was

<sup>1</sup> *Hist.* VI, 9, x.

<sup>2</sup> *Ibid.*, VI, 5, i.

<sup>3</sup> V, 12, vii. "In the *Republic* of Plato, Socrates treats of revolutions but not well, for he mentions no cause of change which peculiarly affects the first or perfect state . . ." (transl. Jowett).

<sup>4</sup> Cf. Barker, *op. cit.*, 249.

making under his nose, the establishment of a new imperial order that undercut the city constitutions.

Thus although the Greeks knew the concept "revolution" and were able to express it in a word, they did not always choose the same word and sometimes chose two or more. The reason for this must be sought in the fact that their civilisation had experienced no classic revolution as did ours in the Revolution of 1789.

## (ii)

It was the same with the Romans. They called a revolution, or rather its result, by the name of *novae res* and expressed its dynamic aspects by some such phrase as *novis rebus studere* or *res novare*. Other expressions were *mutatio rerum* and *commutatio rei publicae* which were still used by Renaissance authors when the time came for them to translate Aristotle's *Politics* into Latin. Further there is *res novas tentare* as a gloss for *νεωτερίζειν*.

The first revolution in Roman history was that of the Patricians who ousted foreign Tarquin. After the foundation of the Empire there was an unceasing struggle for supreme power within the state, a struggle that was confined to the military. The ensuing changes must be classed with the "palace revolutions" of other histories, since they scarcely affected the structure of the state. In between the early and late periods there was the protracted struggle between patricians and plebs, culminating in Cinna's brief moment of power on behalf of the commoners and the bloody reaction inaugurated by Sulla in the service of the nobility. Then came civil wars up and down the Roman world, which grew to be an issue not between social classes but rival generals. By the time that Julius Caesar emerged victorious it was clear to all that the social struggle as hitherto known was obsolete and that ordered government could only be assured by a unanimous army. It is not surprising, then, that no technical term in anything like our sense was evolved during the Roman epoch. Nevertheless, a modern historian in a lucid account of these events entitles his chapter "The period of revolution 133-49 B.C."<sup>1</sup>

Professor M. L. Clarke has kindly provided a valuable note on Cicero's usage when referring to these matters: 'In his *De Republica* Cicero adopted from Plato and (more directly) from

<sup>1</sup> H. F. Pelham in *Outlines of Roman History*.



Polybius the idea of cycles of constitutions.<sup>1</sup> So Cicero writes "miri sunt orbes et quasi circuitus in rebus publicis commutationum et uicissitudinum" (*De Republ.*, i, 45). He regards these changes as natural, but not inevitable; the wise statesman can foresee and prevent them. When he surveys past Roman history he sees the cycle in action. "Hic ille iam vertetur orbis"—Soon you'll see the wheel turning (*De Republ.*, ii, 45). The same idea of the *orbis*—cycle, circle, wheel—appears in Cicero's letters with reference to contemporary changes in the political world: "orbis hic in republica est conuersus" (*Att.* II, 9, 1). "Sperabam . . . sic orbem rei publicae esse conuersum ut uix sonitum audire, uix impressam orbitam uidere possemus" (*Att.* II, 21, 2).

In his later life Cicero saw the revolution by which Caesar attained power as part of the natural cyclical process described by Greek philosophers: "Id ipsum a Platone philosophiaque didiceram, naturales esse quasdam conuersiones rerum publicarum, ut eae tum a principibus tenerentur, tum a populis, aliquando a singulis. Quod cum accidisset nostrae rei publicae. . . . (*Div.* II, 6). In other words, *conversio* is used (with such words as *motus* and *perturbatio*) for political revolutions.'

It is an uncommon thing to find revolution associated with the Middle Ages (as distinct from "Mediaevalism") even in modern authors who use "revolution" freely in retrospect. The reason is of course to be found in the well-established hierarchy of mediaeval life which in some parts seemed on the point of becoming a caste-system,<sup>2</sup> and in ideas of divinely willed legitimacy. But as soon as urban communities attain self-consciousness revolutions are met with, and it is not very long before the name which is the object of this study is applied to some of them. Compared with these the jacqueries of the rural areas were so many expressions of aimless discontent, action (of a sort) was so much ahead of thought that military victory must have led to a situation of intolerable embarrassment to the leaders. During the Peasant Wars in sixteenth-century Germany, for example, the programme of the peasant leaders envisaged neither the cessation of the monarchy nor the abolition of the aristocracy, indeed it was hoped that the great princes would collaborate with the rebels in the attainment of their very modest aims.

In Rome the events of 1234 constituted a true revolution,<sup>3</sup>

<sup>1</sup> Polyb., *Hist.* VI.

<sup>2</sup> As in Germany round about 1200.

<sup>3</sup> See W. Gross, *Die Revolutionen in der Stadt Rom 1219-54* (*Historische Studien*), Heft 252 (1934), p. 40.

but it is described in traditional terms in Latin. In Bologna in 1253 Brancalcione was to produce a *pacifica et iusta gubernatio*, by means of what one of his historians has called "eine kommissarische Diktatur".<sup>1</sup> But for the year 1355 in the *Cronica* of Matteo Villani we find:

Hauendo l'Imperadore ueduto la subita revoluzione fatta per gli cittadini di Siena, d' hauere disfatto, e abbattuto il loro antico reggimento dell' ordine de Noue . . . prese sospetto di lasciarla in libertà.<sup>2</sup>

This use of *revoluzione* is remarkable for its occurrence with *fatto*. As will be shown when its etymology is discussed, *revoluzione* began by referring to political events that came to pass beyond all human power to influence them: yet here we have the extremely modern *fatto per gli cittadini di Siena*. Moreover, the events of 1355 in Siena, when an oligarchic regime was ousted by one decidedly popular in tone, are fully deserving of the name of "revolution" in its modern sense. In another passage referring to the same event, however, Villani uses the more conventional expression *e le nouità fatte nella città di Siena*,<sup>3</sup> and in a third passage *riuoluzione* means general political unrest:

Il Vescouo di Trieui veggendo il Reame di Franci in tanta riuoluzione, e trauerse. . . .<sup>4</sup>

Half way in development between this and the first quotation from Villani comes

segno di cio furono le reuoluzioni, e graui nouità

referring to the unrest in Lucca following a rumour that the populace was to be liberated from its *usciti*.<sup>5</sup>

The anti- and pro-Medicean Revolutions in Florence of the years 1494, 1512 and 1527 are all called *revoluzione* by the historians who witnessed them, but care is needed here to determine in just how modern a sense: for as will be seen when we come to seventeenth-century England one of the meanings of "revolution" in earlier days in its political sense was "return to a starting point", that is, the restoration of an earlier regime. This is possibly what the Florentine historians had in mind, since the banishment of the Medici in 1494 was a return to a more democratic regime (fused with theocratic elements intro-

<sup>1</sup> See W. Gross, *op. cit.*, p. 91.

<sup>2</sup> IV, xc (edn. of 1581-96, p. 270).

<sup>3</sup> IV, lxxxii (p. 266).

<sup>4</sup> IX, xxxiv (p. 526).

<sup>5</sup> V, xix (p. 285).

duced by Savonarola); the reinstatement of the Medici in 1512 was a return to the regime of before 1494; and the second banishment of the Medici in 1527 was a return to the regime of before 1512. The historian Jacopo Nardi, who was anti-Medicean, applies the term to the events of both 1494 and 1512, showing no party bias:

Ma quello proprio libro segreto . . . non fu ritrovato nella rivoluzione dello stato dell' anno 1494.<sup>1</sup>

La mala contentezza d'una gran parte de' potenti cittadini . . . fu principalmente la causa della presente rivoluzione . . . (i.e. 1512).<sup>2</sup>

Benedetto Varchi refers to the "Tumulto di Venerdì" of the 26th of April, 1527 in Florence as the *Revoluzione di Venerdì* although it was but a false start to the veritable revolution several weeks later.<sup>3</sup>

Despite these early examples the rarity of the term is emphasized by its virtual absence from the works of Macchiavelli (so far as the writer has been able to discover), though his modern translators make frequent use of it when rendering such expressions as *mutazione di stato*.<sup>4</sup> Can it be that in his insistence that fate left some scope for human action, causing him to describe each and every stratagem connected with the seizure or maintenance of power, Macchiavelli was consciously avoiding a term in which associations with the superhuman forces of the constellations still lingered on?

On the other hand Guicciardini, writing between c. 1508 and 1512, uses *rivoluzione* in the sense of "constitutional change":

(Piero di Cosimo de' Medici) lasciò due figliuoli, Lorenzo e Giuliano; de' quali Lorenzo, che era el maggiore, era di età di anni venti o ventuno; e benché molti stimassino così nella città come fuora che la sua morte avessi a partorire rivoluzione, nondimeno . . . feciono conclusione di mantenere . . . lo stato presente . . .<sup>5</sup>

<sup>1</sup> *Storie Fiorentine*, ed. Arbib (1838-41), I, 22 (Book I). Begun 1553.

<sup>2</sup> *Ibid.* II, 11 (Book VI).

<sup>3</sup> Varchi, *Storia fiorentina*, II, 17 quoted Rosenstock, *op. cit.* Cf. C. Roth, *The Last Florentine Republic (1527-1530)*, pp. 23 ff. Varchi also uses verbal expressions like *rivolto* (participle) Bk. iv = Arbib (1838), I, 215, and *rivoltò (lo stato) ibid.*, p. 281.

<sup>4</sup> In *The Prince*, ch. 26, there occurs in the phrase *tante rivoluzioni d'Italia*, but as Dr. Rubinstein kindly pointed out when supplying the reference it is used in the general sense of *mutazioni*, rather than in the special sense of "revolution": E nou è meraviglia . . . se in taute rivoluzioni d'Italia, e in tauti maneggi di guerra, e' pare sempre che in quella la virtù militare sia spenta. . . .

<sup>5</sup> *Storie Fiorentine* (ed. R. Palmarocchi, 1931), chap. 2, pp. 20-21.

It is sufficiently clear, then, that the term came to North-Western Europe, where the classic revolutions were to be made, from the turbulent though facile city states of Northern Italy, and it is quite in order that the *New English Dictionary* should quote "revolution" for the first time in anything like a modern sense in a translation from the Italian. In his *Dell' unione del Regno di Portogallo* (edition of 1585) Conestaggio writes:

. . . i quali alloggiarono uoluntariamente in Eluas assicurando quel contorno delli reuolutioni che che si potessero temere.<sup>1</sup>

which E. Blount renders

. . . who lodged at Eluas, assuring those quarters from all reuolutions that might be feared.<sup>2</sup>

Rosenstock notices the Italian provenance of the term and shrewdly observes that it was not adopted in other lands until the age of the great politicians, and then because of its impersonality and amorality, which so characteristically distinguish it from "revolt", "civil war", "disorders" and other words tinged with ethical notions.<sup>3</sup>

(iv)<sup>4</sup>

The first national revolution took place in England and so we shift our attention to this country, though it lies further afield from Italy than France.<sup>5</sup>

As Hegel has said, it is essential to bear in mind that England had already undergone the Reformation. Thus one of the words by which the Levellers (who were opposed to the old regime and its rebels as well) referred to the new order they were consciously striving to create, was "reformation". The others were content to consider that they were occupied with a "justifiable rebellion", and "The Great Rebellion" is the name that has stuck. Under the impact of the events of the French Revolution Burke referred to those of 1648-49 sarcastically as a revolution!<sup>6</sup> It was not until 1826-27 that the events of 1640-60 were seriously termed a "revolution" and then again it was by analogy with the French Revolution of 1789, by the

<sup>1</sup> P. 142.

<sup>2</sup> *The Historie of the Uniting of the Kingdom of Portugal* (1600), p. 175.

<sup>3</sup> *Op. cit.*, 100.

<sup>4</sup> I am indebted to Mr. R. C. Latham for his help with this section.

<sup>5</sup> For France, A.D. 1636, Monet, *Abrégé du parallèle des langues françaises et latines*, gives the gloss: Révolution d'Etat—publicae rei commutatio.

<sup>6</sup> *Reflections on the Revolution in France*. Quoted Rosenstock, *op. cit.*, pp. 111-112.

French historian Guizot in his *Histoire de la Révolution d'Angleterre*.<sup>1</sup> "The Puritan Revolution" was tried as a title but failed to displace "The Great Rebellion".<sup>2</sup>

On the other hand the events of 1660 were called a revolution in their own day and even in anticipation, since in the Clarke Papers of 1655 there occurs the sentence:

Hee (Sir Arthur Hasilrige) was very jealous of the intended revolution of the government to his Majestie's advantage.<sup>3</sup>

The reason for this is that "revolution" as we saw, could also mean a "turning back to the starting-point" (as in Polybius):

"Voyant qu'il ne pouvait pas empêcher cette révolution (le Gouverneur de Poitiers) s'y laissa entraîner et composa avec le roi." (Hardouin de Pefixe (1661), quoted from the edition of 1662, p. 224.)<sup>4</sup>

It is in this sense that Clarendon uses "revolution" of 1660, a return to old times, and it is significant that he considered "the motions of these last twenty years . . ." to "have proceeded from the evil influence of a malignant star".

But when the other party came in again in 1688 it was a return to old times for them, too, and thus "a revolution"! Moreover the change marked a perfect century, a complete turning of the heavens (or was it not also Fortune's Wheel that governed political change?), since the Papists had also been driven from these shores in 1588!<sup>5</sup> Evelyn recognised this as events unfolded, for he writes in his Diary:

The Papists in office lay down their commissions and fly . . . it looks like a revolution (2nd Dec.).

Englishmen were beginning to learn how these things happen. On the first occasion, despite the Levellers' plan for a new order, there were many signs of faltering, of being led by events rather than of shaping them. Had the rebels been told they were making a revolution they would have received the information with the pleasurable surprise of M. Jourdain when told that he habitually spoke in prose. "The Second Civil War of 1648",

<sup>1</sup> Noticed independently by Rosenstock, *op. cit.*, p. 112, and R. C. Latham, *History XXX* (1945), p. 39, where the nomenclature of the three English revolutions is judiciously discussed.

<sup>2</sup> Latham, *loc. cit.*

<sup>3</sup> N.E.D., "Revolution".

<sup>4</sup> Rosenstock, *op. cit.*, pp. 92-93.

<sup>5</sup> *Op. cit.*, p. 96. It is more likely that the events of 1648-49 failed to be called a revolution in their own age because they were not a return to a previous regime, rather than because they were less sudden than those of 1660 and 1688. Cf. Latham, *loc. cit.*

writes a modern historian, "finally showed the army leaders what they must do . . . abandon compromise and decide on the complete abolition of the monarchy."

## (v)

During the period leading up to the Revolution in France, it is clear, the word was a means of focussing the attention of politicians and historians alike on the issues that were to bulk so large. Diderot's *Encyclopaedia* has a general article on revolutions, for which, naturally enough, the English Revolutions provide the main material. The various actions and reactions from the reign of Charles to that of William are faithfully traced. It is stated that Cromwell's usurpation had been occasioned by a preceding rebellion embarked upon not without some justification in relation to liberty, but without valid pretext in religion.<sup>1</sup> Montesquieu, Rousseau and Voltaire use the word "revolution" in its current and even future sense side by side with meanings which the Revolution itself is to render archaic.

In his *L'inégalité parmi les hommes* Rousseau uses the word in a sense which Rosenstock describes as the one which had asserted itself since the Revolution of 1688, that of "objective total overturning":<sup>2</sup> for of the First Stage of human existence Rousseau says it is the least subject to revolutions;<sup>3</sup> and argues that metallurgy and agriculture were the two arts whose invention produced the great revolution that constituted the Second.

In the *Contrat Sociale* he speaks of the great revolution that time might bring about in the cult of Calvinism;<sup>4</sup> and elsewhere he prophesies that the Tartars will make themselves masters both of the Russians and ourselves, a revolution which it seems must inevitably come to pass.<sup>5</sup> In the next two quotations we come near to the thought and expression of Aristotle. In *L'esprit des lois* V, 11, Montesquieu remarks that "toutes nos histoires sont pleines de guerres civiles sans révolutions, celles des États despotiques sont pleines des révolutions sans guerres civiles", further (28, 29) "Les événements mûrissent et voilà des révolutions";<sup>6</sup> and Turgot,

<sup>1</sup> Article, "Revolution". By 1765 the general concept of revolution in the modern sense was established in some circles in France as is to be gleaned from the title *Histoire des Révolutions de Florence sous les Médicis*, a translation of Varchi's History by M. Requier of that year.

<sup>2</sup> Rosenstock, *op. cit.*, p. 101.

<sup>3</sup> Pt. II (quoted Rosenstock, *op. cit.*, p. 101).

<sup>4</sup> II, 7, quoted *ibid.*

<sup>5</sup> II, 9, quoted *ibid.*

<sup>6</sup> *Ibid.*

"Le despotisme enfante les révolutions."<sup>1</sup> Condillac (*Histoire Ancienne* XV, 2,<sup>2</sup> still puts the cart before the horse with "Les révolutions des opinions suivent les révolutions des empires": but Voltaire already has it the right way round: "Il se fera sans doute un jour une grande révolution dans les esprits" (letter of 1765, No. 5963).<sup>3</sup> Rosenstock stresses the importance of this transference of revolution from the objective to the subjective sphere,<sup>4</sup> and considers that the modern phase enters during the Revolution itself with the coinage of the adjective "révolutionnaire". In remarking on this word Condorcet shows himself intellectually abreast of the events happening under his eyes: "'révolutionnaire' ne s'applique qu'aux révolutions qui ont la liberté pour objet".<sup>5</sup> These indeed were the years when thought and action kept in step. At the end of his *Philosophie der Geschichte* Hegel wrote: "The idea, the concept of law and justice asserted itself of a sudden, and the old structure of injustice was unable to withstand it. Thus a constitution was now reared through the idea of justice, and henceforth everything was to be based on those foundations. Ever since the sun had stood in the firmament and the planets revolved about it, it had not happened that Man should stand on his head, that is, take his stand on thought and build reality according to its laws."<sup>6</sup> Rosenstock, too, is moved to say that before 1789 the elemental force of events themselves had taken the lead, with consciousness following behind, as in 1688, when the choice of the word "revolution" from the vocabulary of natural science served to establish the nature of objective change in world events, and to neutralise all party influences in the creation of the historical picture that was being attempted—but that all was now changed.<sup>7</sup> The present writer, too, must add his grain of sand to the mountain and record that when busying himself with the etymology and semantics of the word he could not fail to observe that whereas the makers of the earlier revolutions had lagged behind events in their thoughts, up-to-date revolutionaries seemed to be one, if not three or four, steps ahead of events: so that in latter days,

<sup>1</sup> Pt. II, 9, (quoted Rosenstock, *op. cit.*, p. 101).

<sup>2</sup> *Ibid.*

<sup>3</sup> *Ibid.*, p. 102.

<sup>4</sup> *Op. cit.*, 103-104.

<sup>5</sup> *Œuvres* (Publ. A. C. O'Connor et M. F. Arago, 1847) XII, 516, quoted Rosenstock, *op. cit.*, 107-108.

<sup>6</sup> *Op. cit.*, 535.

<sup>7</sup> *Op. cit.*, 121. Rosenstock goes on to make the very interesting observation that this long anticipation of revolution in thought has the effect of "sterilizing" or "inoculating" it.



for example, one is not surprised to learn that Bertrand Russell's grandfather (having lost his reason years before) started up out of his sleep one day at the sound of a gunshot in the grounds of his mid-Victorian home, with the question "Is it the Revolution?"

## (vi)

In a passage just quoted from Rosenstock's monograph it was claimed that the political term "revolution" was taken from the vocabulary of natural science. An enquiry into the etymology of the word thus cannot be long delayed.

It is not generally recognised that when a word with important social implications affecting millions of people is new-coined, or an old word receives a new connotation, this happens in relation to a widely felt emotional stress. To establish the true etymology in such cases, to discover the authentic flavour of the idiom or metaphor which inspired the neologism is at the same time to lay bare the emotions of a class, of a movement or an age. Far from being a game for antiquaries, etymologising can be of assistance above all to historians, if pursued in the right spirit. R. G. Collingwood perceived this, for he expended no less than four of the extremely terse pages of his *New Leviathan* (1942) on the semantic history of the word "revolution".

"Revolution", says Collingwood, "was borrowed towards the end of the seventeenth century by the vocabulary of politics from the vocabulary of literary criticism. In literary criticism it meant what Aristotle in his *Poetics* had called "peripety", of which word the French "révolution" was a literal translation. By a "peripety", a reversal of fortune for which the spectator is unprepared, the "hero" of a play is plunged from happiness to despair to make a tragedy, or if it happens the other way about, a comedy. Collingwood finds Aristotle's analysis superficial here, for many great dramas and novels do not conform to the scheme. Even in its proper sphere, then, Collingwood considered the idea of revolution to be overworked by Aristotle and the French critics of the seventeenth century. How much more so in history! The transference of that idea to political history, which (so he maintains) first happened when people spoke of the Glorious Revolution of 1688, indicated and then perpetuated a superficial conception of history. Historians to-day know that all history consists of changes and that all these changes involve "reversals of fortune". But

in the sixteenth century this was not known, so that when the smooth course of history "waggled" they were surprised. And so (concludes Collingwood), but for a purely conventional sense inherited from a less historically minded past, the word "revolution" has fallen out of use among historians much as the word "chance" has fallen out of use among physicists.<sup>1</sup>

The writer has done his best to verify this promising thesis, but must confess that neither Rosenstock's nor his own researches have revealed the sources from which Collingwood's assertions could be derived. From the bare factual history of "revolution" as a political term it is clear that its origin has to be sought not in France but in Italy, where the first revolutions of the epoch occurred; not in the writings of literary critics, but of historians; and not in the seventeenth but in the fourteenth century. It is true that French critics sometimes use the word in the sense of "reversal of fortune":<sup>2</sup> but so did Shakespeare in 1602:

"This (says Hamlet musing on Yorick's skull) might be my Lord such a one that prais'd my Lord such a ones Horse when he meant to begge it; might it not? . . . Here's fine Revolution. . . ."

When the French critics came to render Aristotle's *περιπετεια* they followed the Renaissance Latin and Italian practice and acclimatised it as *péripétie*, as Racine in his marginal notes.<sup>3</sup> Nevertheless *révolution* would have been an excellent translation for *περιπετεια*, and it is possible that some minor French critics may have used it thus. But even if they did, Villani's use of *revoluzione* in the middle of the fourteenth century in a rather modern way disqualifies Collingwood's etymology on chronological grounds. The enquiry must proceed elsewhere.

*Revolutio*, as its ending shows, is a late Latin coinage. Augustine uses it of the migration of souls.<sup>4</sup> It then comes to be used of the revolution of the heavens. Dante uses it in the vernacular in this sense<sup>5</sup> and so does Chaucer in his

<sup>1</sup> *New Leviathan*, pp. 199ff.

<sup>2</sup> Thus La Bruyère and Racine, and also Molière on one occasion in a play "All the revolutions to which inhuman fortune can expose us" (*Psyché* I. 611f.).

<sup>3</sup> *Principes de la Tragédie*, ed. E. Vinaver (1944), p. 14. Of a dozen versions of the *Ars Poetica* in Latin and Italian, all adopted *peripetia* with or without a gloss, which, however, was never in terms of *revoluzione*.

<sup>4</sup> Civ. D. 22, 12.

<sup>5</sup> E.g. Astrol. 144, La *revoluzione* di qualsivoglia figura celeste è il ritorno del sole in quel punto del zodiaco dove si trova a quando fu calcolata la proposta figura.

Astrolabe.<sup>1</sup> From this there naturally follows the sense of a "revolution of time" or "of the ages", and so "change through time" and then "a sudden, surprising change", a development of meaning which can be adequately studied in the *New English Dictionary*, though it neglects the political implications of the meaning of "turning forward or backward to a starting point" (cf. Milton's "Fear comes thundering back with dreadful revolution on my defenceless head," *Paradise Lost*, x, 13, and the Revolutions of 1660 and 1688 as interpreted above) and the decisive part played by astrological conceptions in its semantic development. But this last has yet to be demonstrated in this study, the connexion between the stars and politics.

Clearly, what is wanted is an early fourteenth-century Italian context in which the revolution of the heavens is associated with political change, accompanied perhaps by some suggestion of Fortune's Wheel.

In his famous book on the *Culture of the Renaissance in Italy* Jakob Burckhardt observes that it is above all in the city states of Italy that astrological practices, which had lingered on from the ancient world, experienced an astonishing revival which was probably reinforced by Arabian influences.<sup>2</sup> It was not just chance that Frederick II, the free-thinking product of Sicily, where Christian and Saracenic culture overlapped, set a fashion in court-astrologers that maintained itself into the days of the condottieri and beyond and imposed itself even on popes and their clergy.<sup>3</sup> Florence had a Chair of Astrology which dated from 1378, Pavia's was founded four years earlier. In evidence of pre-academic practice the burning of Cecco d'Ascoli in Florence in 1327 for calculating Christ's nativity may be cited, or Villani's entry under the year 1362, recording that the precise hour when the Florentines should issue out against their Pisan enemies was decided by astrology.<sup>4</sup> At about the same time Salutati considered that the feud between the Guelphs and the Ghibellines was determined by the stars, though he changed his mind later.<sup>5</sup>

<sup>1</sup> ii, 7, 13.

<sup>2</sup> II, ch. iv. Perhaps the Arabic noun *dawlat* is to be brought in here, which Rosenstock quotes merely as an external parallel. Derived from a root whose intrinsic meaning is change, alternation, *dawlat* stands for the revolution of the constellations, new dynasty (especially the Abbasides), the period of rule of a new dynasty—cf. such expressions as "The twelfth year of the revolution", in the U.S.S.R.

<sup>3</sup> *Ibid.*

<sup>4</sup> *Ibid.*, Villani XI, iii.

<sup>5</sup> *Op. cit.*, Excurs. CIX.

Burckhardt was in no doubt as to the meaning of these portents. "Belief in the Divine Government of the world had been shaken to its foundations in some; others, as for example, Dante, consigned life on this earth, at least, to Chance and its misery. Swiftly into the breach there came astrology. . . ."<sup>1</sup> All that Burckhardt's interpretation needs to complete it is the observation that the delusion which was so symptomatic of the breakdown of mediaeval Christian society itself provided the name for the thing by which it was being effected: "revolution".

Pursuit of an astrological context in which *rivoluzione* occurs with reference to the overturning of regimes and of a date anterior to Villani's entry of 1355 must be left to those who are expert in this very special subject. It must certainly exist. But it will lie further back, for, as we saw, Villani already says *rivoluzione fatto per gli cittadini*, which shows that the influence of the stars has been forgotten, and we know from the entry of 1362 concerning the war with the Pisans that Villani himself strongly disapproved of belief in astrology. Until this crowning quotation from early fourteenth-century astrology is found, recourse must be had to two stop-gaps. First there is the general statement of Gundel, an authority on the history of astrology, to the effect that the belief of the ancients in a universal activity of the constellations affecting the whole human race<sup>2</sup> maintained itself especially in those astrological texts which bring periods of time under the ascendancy of sidereal regents, that is, astrological forecasts for the year which place all political and meteorological events within the space of a year under the influence of the heavenly god or sign which dominates the world at the beginning of the year.<sup>3</sup> This is observable from the tenth century onwards. Secondly, there is an example actually containing the word "revolution" quoted by Rosenstock for sixteenth-century Germany:

Saturnus selbst mit dem Mars wird umtreiben als mit göttlichem Rach die ihnen wider die Kirchen streben und ihre Ritter, wann er vergisst den Schwan, der Fische und die Hörner des Stiers in der ersten Revolution, die jetzum geschehen und so werden trawen die türkischen mit den zerstreuten von der Schar der Christen.<sup>4</sup>

To such annual revolutions may be added the conception of the Great Cycle, according to which in the fulness of time the

<sup>1</sup> II, ch. iv.

<sup>2</sup> W. Gundel, *Sterne und Sternbilder* (1922), p. 213.

<sup>3</sup> *Ibid.*

<sup>4</sup> *Op. cit.*, p. 86. Perhaps "*den Schwan, der Fische*" ought to read "*den Schwanz der Fische*", parallel to "*die Hörner des Stiers*". Otherwise there is an anacolouthon.

whole sorry business of human existence must be gone through again down to the last pedantic detail.

## (vii)

It is now possible to discuss definitions of the word "revolution". The *New English Dictionary* offers "The complete overthrow of the established government, a forcible substitution of a new ruler or form of government". Have historians anything better to offer that would make it unnecessary for Collingwood's axe to fall? Has any attempt been made to introduce the idea of the "historical process" more successfully than is achieved by this definition from the *New English Dictionary*?

From Polybius onwards the idea of divine machinery (if only of the lay goddess Fortune) was discernible behind the earlier use of ἀνακύκλωσις and *rivoluzione*; in revolutions after 1789 it is man-made machinery that lends force to the image: so that the sequence of god-given and man-made revolutions observed by Hegel and Rosenstock is reflected in the very imagery used by a variety of writers both ancient and modern in their efforts to express this baffling idea; with the proviso that the earlier school probably believed in the intrinsic worth of its terminology. Of the turning of the heavens and of that early artefact the wheel nothing more requires to be said, while the consistency of modern authors in choosing mechanical terminology is not so surprising on reflexion as it might seem: having inherited "revolution" from the past what was more natural than that they should apply it to political matters by analogy with the myriad wheels (and wheels within wheels) that were now beginning to revolve in the factories of Europe, and through their revolutions to grind out yet other revolutions? Thus it is not surprising that Heitland, the historian of the Roman Republic should lament concerning the patrician revolution which ousted Tarquin that "as for machinery, we do not know how the change was effected". Again, in an interesting account in Cassel's *Encyclopaedic Dictionary* of 1910, Dame Fortune's Wheel appears tamed by mechanics, for "in most revolutions there are three turns of the wheel: first there is the moderate movement forward, then, after a time a second forward movement. The extreme party who now come to power create a reaction against the Revolution and the wheel moves backwards." (The author of this information signs himself "A Jesuit".) Before he comes to

his definition of "revolution", after a section entitled "The Mechanicalness of Mimesis", Toynbee works off steam in a Parable of a Piston, and it is with the idea of a piston in one's mind that one must approach his definition: "Revolutions may be defined as retarded and proportionately violent acts of *mimesis*. The mimetic element is of their essence, for every new revolution always has reference to something that has happened elsewhere . . . and it is always manifest . . . that this outbreak would never have occurred of itself had it not been thus evoked by a previous play of forces."<sup>1</sup> This Toynbee confirms in the following volume with the statement that "Revolutions are retarded acts of *mimesis* in which the individual or community or society that is undergoing the revolution is responding to a challenge from some other party".<sup>2</sup>

Clearly none of these latter-day descriptions offers anything that would entitle it *as a definition* to take its place beside the one offered by the *New English Dictionary*, but they and others<sup>3</sup> all seem to share the following ideas: continuous "forward" pressure, retardation by "backward" pressure, explosion, further forward and backward phases, in terms of parties conflicting through their varying degrees of "forwardness" and "backwardness". Can these ideas be assembled into an integral definition to cover all cases? Or failing that, to cover a sufficiently important number of cases to justify allocating the rest to a new term or terms?

Scarcely, as the following considerations will show. Skepticism as to the feasibility of an integrated "modern" definition is grounded not in any lack of faith in the ability of historians to formulate and define, but in the nature of historic process itself. If it be permitted to continue Toynbee's parable it might be said that each succeeding explosion in so far as it is recorded and read in "history" modifies the machine in which it takes place—rather than of a piston one is reminded of the Channel gun that had to fire a different sized shell at each round owing to wear on the bore. To be plain, it is clear that one's working conception of revolution must modify one's making or breaking of revolution, and one's making or breaking of it must in turn modify one's conception of it. If it is true that the type of revolution which involves the seizure of power from below tends to provoke a reaction, at a certain phase, among

<sup>1</sup> *A Study of History*, iv., 135.

<sup>2</sup> *Op. cit.*, v, 231.

<sup>3</sup> E.g. A. Meusel in the appropriate article in *The Encyclopædia of the Social Sciences*, an article on the whole remarkably free of misleading metaphor.

those previously on top, it is clearly possible for those newly come to power to seek to destroy such a reaction in bud or root or soil. If the effort to forestall the reaction is successful, not only is the world minus a reaction, but the lexicographer has had a part of his "definition" whittled away, a definition that may have served him well for the last revolution, but which now, to be of any further service, will have to contain some such proviso as "unless the reaction be forestalled . . .".

But there is another difficulty in the way of arriving at a definition more apt to the needs of the dynamic historian than the one offered by the *New English Dictionary*. Resuming the analogy of the explosion it appears that it is very hard to draw the line between an explosion and an escape of gas, a statement which is as true of politics as of physics: consideration of Aristotle's collection of revolutions or of those of the N. Italian city states or of those in the history of the Latin American Republics (not to mention a mounting list in Europe and Asia) shows that there is a gradation of types, to attempt to generalise whose varying aspects drives us back willy-nilly to the definition quoted from the *New English Dictionary*.

Following up a remark that examples might perhaps be found in Latin American history to illustrate all the types of change discussed by Aristotle in his *Politics*, Professor R. A. Humphreys has kindly furnished an estimable memorandum, which shows that the air of comic unreality that has played about most Latin American revolutions as seen through Anglo-Saxon eyes is actually imported into them through our naïvely equating the word *revolución* with our own word "revolution" . . . and so the joke is really at our expense. Professor Humphreys first explains that the apparently contradictory title of the dominant party in Mexico, the *Partido Revolucionario Institucional* is a fine example of permanence in change, for the complex of events in Mexico since 1910 is all comprehended under the title "the Revolution" and in Mexico the Revolution has become institutionalised. He then goes on to say that in Latin America the English or European student must learn his grammar of politics anew. Revolutions are not or are very rarely violent convulsions which shake the foundations of society. They have been apt to take place in one corner of the market place while life flows on peacefully in the other. No one would alter his daily routine just for another revolution, and indeed, there have been cases where the revolution has been announced beforehand to take place the following afternoon. This (Professor Humphreys admits) is rare. The point is, however, that a



revolution is simply a recognised extra-legal method of changing a government. The Mexican Revolution, which comprehends a period of violence, followed by successive phases of reconstruction and consolidation, is an exception. There has thus been what might be called a tacit agreement between the governors and the governed whereby the governors do not interfere too much with the essential liberties of the governed and the governed do not interfere too much with the business of governing. If this delicate balance was upset, the one had the prescriptive right of revolution and the other that of coup d'état.<sup>1</sup>

With regard to revolution as an institution Rosenstock, too, draws attention to the change of meaning implied by such phrases in Russian as "The Twelfth Year of the Revolution" and observes that the Revolution has become a whole era.<sup>2</sup> Another point made by Professor Humphreys for Latin America also finds a parallel elsewhere, for "the legal right of revolution" is recorded as a feature of Byzantine history.<sup>3</sup> Thus only a wide definition like that offered by the *New English Dictionary*, or indeed Aristotle's extremely judicious μεταβολή (και στάσις) with its implied rejection of νεωτερισμός can successfully cope with the wide range of examples touched upon in the course of this paper (not to forget the "palace revolutions" of the ancient, oriental and Andalusian histories).

But even if it were agreed to classify them into sub-varieties and to define these, one sort at least would require definition of secondary concepts like "social class", on which alone whole books have been written. Thus the historian who set out to define "social revolution" would find himself well on the way to writing a sociology. Where is the enquiry now? Is a historian committed to proving or disproving the validity of sociology? "In the social world", writes H. Freyer, "there are no static structures, the element of historical movement is an essential part of each sociological concept. . . . We come to the conclusion that sociology has the task of analysing concrete historical and social formations to establish both the laws of growth and the trends of evolution, but that it must not

<sup>1</sup> This is a somewhat abridged version of the original document passed round in Feb., 1948.

<sup>2</sup> *Op. cit.*, p. 84. In 1794 Lord Mornington, Speaker of the House of Commons, noticed a similar Hegelian synthesis for he asked contemptuously how was one to conceive of a "revolutionary government"? (*Johnson's Dictionary*, ed. Todd, 1827).

<sup>3</sup> S. Runciman, *Byzantine Civilisation* (1932), p. 62. The phrase is Mommsen's.

rest there but proceed to form general concepts, concepts which are valid for a multiplicity of instances in the world of history, "as feudalism", "patriarchal principalities", "class societies" and "caste societies". It is the duty of sociology to bring out the pure structures in which historic process manifests itself. . . ."<sup>1</sup> Freier is acutely aware of his position, since he says: "Indeed the system of sociology *confronts logic with new problems*".<sup>2</sup>

Reasonable as this is by the side of many other descriptions of the sociologist's duty, suggestive and helpful as Freyer's and other sociologists' work has been, this is nothing short of saying how desirable it is to have your cake and eat it. There are no static structures, yet pure concepts are required. *Aliter, sed eadem.*

The question thus resolves itself quietly into one of simple usefulness. Let him who has a new concept in this field convince us that it does a useful amount of work. The most hard-working of such terms in any case have a way of getting themselves accepted more or less impersonally through frequent use in wide-awake circles; as with "revolution" they are suddenly there and their origins are difficult to trace. It is indeed profitable to compare societies which can without too much violence be termed "Heroic" or "Feudal", or sections of communities which can be labelled "Castes" or "Classes": but is it not a fact that every generalisation one is tempted to make is jeopardised by deeper consideration of the unique circumstances of the culture, the generation, the locality? Do not such very useful terms after lighting the way to a valuable comparison tend to lose their usefulness and become shackles to right thinking (and perhaps even to right behaviour) once they have brought together what it is fitting should be brought together? To assert this is not to deny the common humanity of mankind but to give the unique features of any particular manifestation of it the consideration they deserve. To doubt this is to have advanced half way to surgical operation on that part of one's subject-matter (in this case flesh and blood) which refuses to be confined by one's terminology.

Consideration of the term "revolution", at least, suggests that this is so. With the mien of the constructive anarchist Collingwood even suggests that the word be utterly abolished. But this would be wasteful, the word's fragility is not just its own: its brittleness is seen to inhere in all historical terminology

<sup>1</sup> *Einleitung in die Soziologie* (1931), p. 127.

<sup>2</sup> *Op. cit.*, p. 125.

and most of all the dynamic, when bruised by logical analysis. Let "revolution" continue to do good work by pointing the way to crucial events involving a shift of power in the state swifter than "evolution" (in the narrow sense) and so mark the common link with all one has learned about such changes until one has penetrated the case in hand in all its unique detail. To do so will save countless hours in the turning over of pages—not nearly enough historians esteem it sufficiently to mention it in their indexes as often as they should, if at all! Once comparison has been effected, the definition (like Lenin's post-revolutionary "state") can be left to wither away and the label "revolution" to stand not as the badge of an historian who deserves our pity for entertaining such illusions, but as a symbol of something that one historian has comprehended as a unified process and a guide to others who aspire to follow him.

Unless one takes one's terminology very broadly and very seriously history does not repeat itself, and history written and read is one of the reasons why: history puts ideas into people's heads which they sometimes put into practice. But to write as if history did repeat itself, as if the terminology used by historians had more than an *ad hoc* validity is extremely stimulating. Even Spengler is very stimulating though howlers can be discovered on most pages. Where it is not megalomania that leads him into error it is his propensity to fall victim to his own terminology, to such dazzlingly dangerous propositions as mandarin = brahmin = effendi :: coolie = pariah = fellah, and all that follows. But so long as we do not take them as seriously as he does himself it is profitable to reflect on them. Professor Toynbee has perceived and consciously avoided the worst defects of Spengler and laid us all under his debt, though not so far that we have to sell our souls. It is his enviable function to play Mephistopheles (that good Christian) to his fellow historians and by showing them things that are not quite real to spur them to greater efforts in pursuit of that which is, or might be real. In doing so he raises the question of terminology in an acute form.

But history is the Devil's own job, and his advocate, having studied one term in some detail, is content to leave it to him.

## VI. DISCUSSIONS

### ON RIGOUR IN SEMANTICS

THERE is a popular impression that the formal study of semantics, as it is now carried on, is an extremely rigorous discipline. This impression is no doubt produced by the apparatus of numbered theorems, special symbols, new terminology, and so on. But rigour is something quite different. Much of Frege's work maintains very high standards of rigour without any of this apparatus. On the other hand the use of such apparatus does not prevent blunders; I shall illustrate this from Carnap's *Logical Syntax of Language* (LS), *Introduction to Semantics* (IS), and *Meaning and Necessity* (MN).

(1) Both in IS and in MN Carnap uses dots and dashes, which he calls 'blanks', as a way of speaking about expressions in general. Now there need be nothing wrong with the use of blanks, especially in informal exposition. Thus, there is nothing wrong with saying that ' $\sim$  ( )' means 'not ( )'; or, for that matter, that ' $\sim$  ( . . )' means 'not ( - - )'. But Carnap makes quite a different use of 'blanks'. For instance, he gives the following two expressions as the respective paradigms of a sentence containing a definite description and of its exposition by means of Russell's theory:

7.2. ' $\sim$  - (1x) ( . . x . . ) - - '

7.4. ' $(\exists y)[(x) ( . . x . . \equiv (x = y)) \bullet - - y - - ]$ ' (MN pp. 32-4).

Now here the correspondence of the dots and dashes in 7.4 to those in 7.2 is part of the syntax. In fact, the dots and dashes function here as *variables*; they differ only typographically from the italics or Greek letters more commonly used. But Carnap really thinks that by *calling* them 'blanks' he gets over any difficulties that would arise from the use of variables. For later on he modifies Russell's contextual definition of the class-symbol as follows:

33.2. ' $. . z(fz) . .$ ' for ' $(\exists g) (g \equiv f \bullet . . g . .)$ '

and adds in the footnote: 'The context is indicated only by dots instead of by a second-level variable, in order to make the definition applicable also to systems not containing such variables' (MN p. 147). But these dots *are* a sort of variable; only, it is left obscure whether they are, after all, a second-level variable of the object-language, or are rather a variable of the meta-language. Either reading would get us into difficulties; but these ought to be faced, not evaded by a sleight of hand.

(2) In IS Carnap gives two inconsistent definitions of the sign of definition itself, only a few pages apart.

(2:1) A definition has the form ' $\dots =_{\text{Df}} \dots$ '; this means:

" $\dots$ ' is to be an abbreviation for ' $\dots$ '—*IS* p. 17.

(2:2) ' $=_{\text{Df}}$ ' is to mean 'is (hereby defined to be) the same as' or 'if and only if'.—*IS* p. 20.

Now 2:2 expounds the sign ' $=_{\text{Df}}$ ' in terms of an expression, 'if and only if', which can stand only between sentences or sentential functions; 2:1 expounds it in terms of the expression 'is to be an abbreviation for', which can stand only between *names* of expressions, not between sentences or sentential functions. But I dare say that in Carnap's opinion accuracy as regards the concept of definition is something to be left aside 'for the sake of simplicity'—*cf. IS* p. 158.

(3) There is a recurrent error in Carnap's use of Gothic letters. In his official explanation he says:

The designation of a compound expression is formed by putting the designations of its parts one after the other in the order in which the parts occur in the expression; . . . brackets, comma, connectives, . . . are in this procedure designated by themselves. Thus *e.g.*, ' $\text{pr}_i(\text{in}_2, \text{in}_1)$ ' . . . designates the expression ' $\text{R}(b, a)$ '—*IS* p. 20.

All would be well if Carnap were talking only about symbolic expressions like ' $\text{R}(b, a)$ '. But he wants his definitions to apply also to expressions in ordinary languages like English. So he gets into difficulties when he tries (*IS* p. 54) to give an example of a sentence in English as meta-language having the form  $\text{pr}_i(\mathfrak{A}_j, \mathfrak{A}_k)$ . For these symbols mean: "the result of writing  $\text{pr}_i$ , then '(', then  $\mathfrak{A}_j$ , then a comma, then  $\mathfrak{A}_k$ , then ')'"'. Carnap gives us indeed an expression of the right form, *viz.*, ' $\text{Des}_G$  ('*drei*', three)'; but this certainly is not an English sentence. By a rule that Carnap has given (*IS* p. 49), it is an abbreviation of the English sentence "'*drei*' designates three in German"; but this is *not* of the form  $\text{pr}_i(\mathfrak{A}_j, \mathfrak{A}_k)$ —unless indeed we correct Carnap's interpretation of these Gothic letters to: "a sentence translatable into the result of writing . . .". This correction is constantly required to make sense of what Carnap says.

(4) The following is the condition to be fulfilled by a predicate  $\text{pr}_i$  of  $M$  if it is to be an 'adequate' predicate for truth in  $S$ :

From the definition of  $\text{pr}_i$  every sentence in  $M$  follows which is constructed out of the sentential function ' $x$  is  $F$  if and only if  $p$ ' by substituting  $\text{pr}_i$  for ' $F$ ', a translation of any sentence  $\mathfrak{S}_k$  of  $S$  into  $M$  for ' $p$ ', and any name (syntactical description) of  $\mathfrak{S}_k$  for ' $x$ '.—*IS* pp. 27-28.

Now if we take  $M$  to be French or German, Carnap's recipe gives us, not French or German sentences, but word-salads containing some French or German words and also the English words 'is' and 'if and only if'. We could of course avoid this by correcting 'the sentential function' to 'a translation into  $M$ , preserving the same variables, of the English sentential function'. But can there then

be no adequate predicate for truth in a meta-language that uses, say, pronouns as variables? And what is a reference to *English* doing in a definition that belongs to general, 'pure', semantics?

(5) Part of the point of a symbolism like Carnap's Gothic letters is to avoid incorrect uses of quoted variables, like generalising "Cicero designates Cicero" to "for some  $x$ , ' $x$ ' designates  $x$ "; which means that ' $x$ ', the variable, is somebody's name! Now Carnap very often falls into just this error.

For any open sentence  $\mathfrak{S}_i \dots$  there is a corresponding closed sentence, designated by ' $( )\mathfrak{S}_i$ '  $\dots$  for any closed sentence  $\mathfrak{S}_j$  there is another sentence which is its negation, designated by ' $\sim \mathfrak{S}_j$ ' — *IS* p. 69.

But plainly ' $( )\mathfrak{S}_i$ ' is *not* intended to designate *all* closed sentences corresponding to open sentences; nor ' $\sim \mathfrak{S}_j$ ', to designate the negations of *all* closed sentences. In both places, 'designated by' should be omitted, along with the quotation marks that follow it.

Carnap takes Heyting severely to task (*LS* pp. 159, 249-250) for expressions like: 'results from  $a$  when the variable  $x$  is replaced whenever it occurs by the combination of symbols  $p$ '. In view of this we may expect the utmost rigour in his own account of substitution. But what do we find?

The expression which arises out of a given expression  $\mathfrak{A}_1$  by the substitution of  $\mathfrak{B}_1$  for  $\mathfrak{z}_1$  will be designated syntactically by ' $\mathfrak{A}_1(\mathfrak{z}_1)$ '  $\dots$   $\mathfrak{A}_1(\mathfrak{z}_1)$  is that expression which arises out of

$\mathfrak{A}_1$  when  $\mathfrak{z}_1$  is replaced by  $\mathfrak{B}_1$  at all the substitution-positions in  $\mathfrak{A}_1 \dots$  If, in  $\mathfrak{A}_1$ ,  $\mathfrak{z}_1$  does not occur as a free variable, then  $\mathfrak{A}_1(\mathfrak{z}_1)$  designates the unchanged expression  $\mathfrak{A}_1$ . — *LS* p. 22.

The second of these sentences is consistent with the other two. The first is wrong because it is not meant that *all* expressions got by substitution share the designation ' $\mathfrak{A}_1(\mathfrak{z}_1)$ '; it should run: ' $\mathfrak{A}_1(\mathfrak{z}_1)$ '

is the expression which arises  $\dots$ ' In the third, similarly, 'designates' should be 'is'. These corrections are easily made; but one who goes wrong like this has no right to judge others.

(6) In *LS* Carnap begins a 'rigorous' account of variables by distinguishing strictly between genuine variables and constants of undetermined meaning (pp. 189-190). I am inclined to accept this distinction; but Carnap has not made it out.

In a name-language, in addition to names with determined meanings, such as 'Prague', names with undetermined meanings, such as ' $a$ ' and ' $b$ ', may also be used. If ' $Q$ ' is a constant **pr** (whether of determined or undetermined meaning makes no difference), then from ' $Q(x)$ ' the sentences ' $Q(\text{Prague})$ ', ' $Q(a)$ ', ' $Q(b)$ ', and so on are derivable.  $\dots$

But what does " $Q$ " stand for in the second sentence? A constant **pr** ' $Q$ '? Hardly; a constant **pr** may or may not have a

determined meaning, but a phrase like : 'whether of determined or undetermined meaning *makes no difference*' (my italics) shows that " 'Q' " is being used as a variable. The sentence might have begun : " For all 'Q', if 'Q' is a constant *pr*, whether of determined meaning or not, then from 'Q(x)' . . . " But now we have a variable " 'Q' ", containing inverted commas as part of itself ; how is this syntactically related to 'Q(x)' and so on, which contain only the letter 'Q', *not* the letter 'Q' in inverted commas ? We could of course escape this difficulty by correcting the sentence thus : " 'Q is a constant *pr*, of undetermined meaning ; so from 'Q(x)' . . . " But Carnap certainly is not clear in his own mind about the distinction he is trying to draw.

The same fact comes out in the example that Carnap says (*loc. cit.*) brings out the distinction 'especially clearly' :

We must write. . . : " If 'A' is false, then for any 'B', 'A  $\supset$  B' is true ", where 'A' and 'B' are abbreviating constants of the object-language . . . (LS p. 159).

For how are we to construe the expression " for any 'B' " ? It looks like a quantifier ; and in any ordinary symbolism quantifiers contain *variables*. On the other hand, 'B' is expressly stated to be a *constant* ; and whether it is or not, its name " 'B' " is certainly a constant, and it is " 'B' " that occurs in " for any 'B' ". Carnap does indeed mention later a queer symbolism suggested by Quine, in which there are no variables, and constants are written in quantifiers ; e.g., '(0) 0 = 0' instead of '(x) x = x'. But it would be charitable indeed to suppose that a symbolism first mentioned on p. 190 was what Carnap had in mind on p. 159 ; anyhow, if it was, he ought to have said so. Moreover, even in Quine's suggested notation the constant contained in the quantifier recurs so as to be 'bound' by it ; but " 'A  $\supset$  B' is true " does not contain " 'B' ", i.e., 'B' immediately enclosed in inverted commas. And these difficulties occur in a passage where Carnap is insisting on the need for accuracy in the use of quotation marks !

(7) There is a well-known convention in mathematics whereby 'the least' or 'the only' number fulfilling a condition is deemed to be zero if there is in fact *no* number thus uniquely described. This has technical advantages ; *every* definite description has just one designatum, which simplifies the rules of substitution. Carnap proposes an allegedly similar convention for language about physical objects—for such descriptions as 'the King of France in 1948' :

It is possible . . . to count among the things also the *null thing* . . . characterised as that thing which is part of every thing. Let us take 'a<sub>0</sub>' as the name for the null thing . . . 'a<sub>0</sub>' seems a natural and convenient choice as descriptum for those descriptions which do not satisfy the uniqueness condition.—MN pp. 36-37.



Now a really similar mathematical convention would be something like this:

It is possible to count among natural numbers also the *standard number*, characterised as that finite integer which is the least common multiple of all natural numbers. Let us take 'X' as the name of the standard number; X seems (etc.).

Further, the null thing is described as corresponding 'to the null class of space-time points'—or, in plain English, as existing nowhen and nowhere!

I could give a good many more examples of inaccuracy; and more than one, of absurdity. But these ought to be enough. Now what is the good of a discipline whose leading exponents do not keep their own rules? And what reliance can we put on the higher developments of formal semantics if this is what the definitions are like? We certainly cannot take anybody's word for it that his results are valid; and does the very great labour of checking them seem likely to be worth while? Perhaps after all it is not so foolish to undertake 'direct analysis' in language everybody can read.

PETER THOMAS GEACH.

## MR. GEACH ON MENTION AND USE

IN a recent note (criticising Mr. P. F. Strawson) Mr. P. T. Geach (*MIND*, October, 1938) offers a rule concerned with the use of quotation marks in talking about variables. The rule runs as follows (p. 491):

(A) If a variable not otherwise bound, occurs in a quotation, it is *ipso facto* bound by the sign of quotation.

Clearly Mr. Geach is not intending to say that quotation marks appropriately placed have the effect of transforming a variable otherwise free into a bound variable. This would of course be incorrect because, as is well known, free variables occurring in a given context are transformed into bound variables by prefixing appropriate quantifiers,  $\lambda$ -operators, etc., to that context. Mr. Geach's use of 'bound' is thus at best misleading.

What then does the so-called rule (A) assert? Consider an object language *L* with the metalanguage *M* and the metmetalanguage *MM*. In *MM* we are able to talk *about* the variables of *L* and also about the names in *M* of the variables of *L*. Each variable in *L* has a name in *M* and every such name in *M* is in turn named in *MM*. Clearly in *MM* the following statement holds:

(B) In *M*, expressions such as '*x*', where '*x*' is a variable of *L*, are not variables but names (i.e., constants).

This obviously true metametalinguistic statement (for suitable *L*) would appear to give a more precise formulation of (A). A fully precise formulation could be given only for languages *L*, *M*, and *MM* whose structure is carefully specified.

The precise formulation (B) rests upon the careful distinction between the *use* and *mention* of expressions. Mr. Geach takes Mr. Strawson to task for failing to observe this distinction. Not wishing to enter into the controversy between them, I should merely like to point out several passages in which Mr. Geach himself fails to observe the distinction properly.

On p. 492, Mr. Geach is careful to place quotation marks around the ' $\supset$ ' and ' $\sim$ ' indicating that these symbols are to be used as object language symbols. Then on p. 493 one reads the following:

(C) "'your parents have another child'  $\supset$  'you are a sibling'" is the name of the sentence 'your parents have another child  $\supset$  you are a sibling'.

The second occurrence of ' $\supset$ ' in this statement is consonant with the assumption that ' $\supset$ ' is an object language symbol. But what about the first occurrence? Clearly the ' $\supset$ ' is not here occurring as an object language symbol, because it is placed between *names* of object language statements. Here it is essential to *mention*, not *use*, the ' $\supset$ '. One might think that Mr. Geach

is employing this symbol *autonomously* (the term is due to Carnap<sup>1</sup>), but if so there is no need of the quotation marks at the bottom of p. 492.

One additional point is important. Mr. Geach uses 'P' and 'Q' as syntactic or metalinguistic variables for the names of sentences. He then employs these symbols in, *e.g.*, the following context (p. 493):

(D) If we assume as premises the forms of sentence  $\sim P \supset \sim \sim P$  and  $(\sim Q \supset \sim P) \supset (P \supset Q)$  we ...

Here, because ' $\supset$ ' and ' $\sim$ ' and presumably '(' and ')', are object language symbols, recourse must be had to Quine's device of quasi-quotation<sup>2</sup>. Otherwise the symbolic contexts in (D) are meaningless. Again, the quasi-quotes would not be needed if ' $\supset$ ' and ' $\sim$ ' were being used autonomously. But if so, why the quotation marks later on the same page?

The distinctions involved here are of the utmost importance for clarity in logical writing. They go back primarily to Frege, were neglected by Russell, and have been emphasised by such logicians as Hilbert, Leśniewski, Tarski, Carnap, Church, and others; but even relatively clear-minded philosophers often fail to use them correctly.

R. M. MARTIN.

<sup>1</sup> R. Carnap, *The Logical Syntax of Language*, 1937, p. 17 or p. 156.

<sup>2</sup> W. V. Quine, *Logic Based on Inclusion and Abstraction*, *Journal of Symbolic Logic*, vol. 2 (1937), esp. p. 146, or *Mathematical Logic*, 1940, esp. pp. 33-7.

## ARE THERE INDUBITABLE EXISTENTIAL STATEMENTS ?

To the widely-held view that empirical statements are never completely certain in their truth or falsity but instead are always merely probable, Mr. Arthur Pap has recently advanced a special objection.<sup>1</sup> There is, he holds, a hitherto uncelebrated type of exception, namely such an empirical statement as 'There exist red things'. A statement like this, he holds, is empirical *and yet necessarily true*.<sup>2</sup> His argument runs as follows: Surely a statement of this sort is significant; that is to say, surely the word 'red' is a significant word. But the word 'red' can have the significance it does only by being capable of either verbal definition or ostensive definition. Since it is not definable verbally, it must be definable ostensively. Hence there must be red things. From the very significance of the statement thus follows its truth.

Now there can be, in philosophy, many illuminating and useful arguments from the nature of language (from the conditions of its being used and understood). But I fear that Mr. Pap's argument is not strictly one of these. For unhappily he misuses the facts about language, from which he wishes to argue. Although these facts are eminently worth pointing out, they no more constitute a rebuttal of scepticism than did Dr. Johnson's toe of Berkeley's thesis.

Let us begin by considering Mr. Pap's exact words. In a crucial passage he writes: "A term like 'red' [unlike 'accelerated motion' and 'chiliagon'] can be defined only ostensively, by pointing to objects that have the quality it designates. Hence, since verbal definition and ostensive definition are the only methods by which the meaning of a term can be exhibited, in a universe containing no red objects or surfaces, 'red' would be meaningless, and the existential statements 'there are red surfaces' would be not just false, but strictly insignificant. In other words, unless at least one red surface (or patch) existed, by pointing to which the meaning of 'red' could be explained, the statement 'there exist red surfaces' would be as unintelligible as the statement 'abracadabra exists'. Existential statements of this sort, then, have the peculiar

<sup>1</sup> "Indubitable Existential Statements", MIND, LV, July 1946, pp. 234-246.

<sup>2</sup> On p. 235 Mr. Pap remarks that he is holding, not that such statements are necessarily true, but only that "their truth necessarily follows from the fact that they are significant". But this remark must not be taken literally, for if he were not holding the first of these two things as well as the second, he could not claim to be challenging the sceptical view. And incidentally, when he claims to be arguing from the fact that 'red' (or 'There exist red things') is *significant*, we must interpret: "significant in the particular sort of way it ordinarily is".

character that the condition of their intelligibility is at the same time the condition which verifies them" (pp. 236-237). And again he writes: "... it follows from the very fact that such terms in common use are intelligible, that there *exist* objects to which it is correct to apply those terms" (p. 240), and the former fact is a "sufficient condition" for the latter, which "*necessarily follows*" (p. 235, his italics).

Mr. Pap, then, is clearly maintaining a rather extreme thesis. He is maintaining that the fact that the word 'red' has the significance it does, is evidence not merely that there *have* been red things, but is evidence indeed that there *are and will be* red things *as long as the word 'red' continues to be used with its present significance*. And he is maintaining, in particular, that it is evidence in the sense of *logically conclusive* evidence. Mr. Pap thus recognizes what kind of evidence orthodox scepticism doubts that we have, and what sort of answer must be made to scepticism if it is to be directly refuted.

But in any likely meaning, Mr. Pap's thesis itself is false. For the thesis seems to be one of the following:

- (1) It is correct to say: "The statement 'Nothing is red' (or from to-morrow nothing will any longer be red) is self-contradictory".
- (2) It is self-contradictory to say: "The sentence 'Nothing is red' is an English sentence and expresses something true".
- (3) It is self-contradictory to say: "Despite the particular kind of meaning of the word 'red', nothing is red".
- (4) It is self-contradictory to say: "The particular meaning of the word 'red' can be explained only in application and yet the statement 'There are red things' is false".

And none of these can be granted. Suppose, for example, that scientists should tell us of a new bomb which injures people's eyes and destroys their ability to identify red and which, if used widely, might thus injure the eyes of everyone. We can imagine that after the wide use of such a bomb, everyone who had previously used and understood the word 'red', and who now after the catastrophe might be asked 'Does anything look red to you any more?' might answer 'No'. And we can imagine that if asked the question, 'Do you see red things any more?' everyone might answer either 'No' or else 'I don't know, I have no way of telling any more whether anything is really red'—the answer depending upon how the question was understood. Or we could imagine a spectroscopist answering, 'It all depends upon what you mean; of course I see red things in the sense that some of the things to which I apply the spectroscope still give the reading by which in the laboratory we have always identified red, but then of course by merely looking with my eyes I can't any more *predict* what reading to expect, as I formerly could, and thus in *this* sense I

don't see red things any more'. We can imagine, in short, that *everyone* might be in the same kind of plight as the man who to-day might say, 'Since that accident last month in the lab, when my eyes were hurt, I no longer see any shades of red at all. At first I got awfully tired of all these blues, greys, greens and yellows.' And what all this shows is that Mr. Pap is mistaken. For we can specify cases in which people, one or all, would for some time go on using the word 'red' in its normally-understood sense *without* having any experience of red things and *without* having any ordinary perceptive evidence that red things were still existing. Indeed, we can imagine, as a possibility, that a bomb of the sort we have described (but improved to work in secret) were dropped on an island and that all the people of the island lost their red-vision without knowing that anything had hit them, and we can imagine that Jones, who was herding sheep all night, and who returned the next morning to the village where usually there were red neckties and red shirts to be seen, wouldn't know at first that everyone hadn't simply put on drab shirts and drab ties, until he had talked to other people. Only then might he have information leading him to say, as others by then were no doubt saying, that everyone had become red-blind. It is exceedingly unlikely in this case, as we have specified it, that they would believe that the school sign had been repainted or bleached overnight and that the dye in their clothing had been affected by some atmospheric change. But even the latter sort of case could be imagined and stipulated, not merely for an island of a thousand people, but on as large a scale as you like.

Thus the ordinary significance of 'red' does not, as Mr. Pap supposes, imply or necessitate the continuing possibility of pointing to red things, nor the continuing occurrence of redness in things. We should grant that the significance of 'red' implies, in an informal sense, that people who understand it thereby share a convention for saying under ordinary circumstances *whether* a thing is red or not. But in no such sense, least of all deductively, is it also implied that there must continue to *be* red things or that ostensive definition must remain actually performable *as long as* the word 'red' continues to be used in its present ordinary way. *It makes sense to imagine all red things changing colour and people being able to say so to each other and to verify it, for some time afterwards*; for the extinction of red things would not immediately cancel the word 'red' in its present usage from our language. It also makes sense to imagine people giving or carrying out instructions to destroy or to recolour all red things. In understanding the word 'red' as they now do, people are able, we admit, to perform some of the acts which Mr. Pap seems to mean by 'ostensive definition'; but they are *able* to do so, not in the sense that there are certain to *be* red things, but only in the sense that if presented with clearly affirmative and clearly negative instances under normal conditions,

they are able to perform the conventional classifying involved in applying and withholding the word 'red'. What they conclusively know is nothing existential about the present or future, but rather something verbal and logical, namely how to use language in conformance with the law of excluded middle.<sup>1</sup>

It seems that in drawing the wrong conclusion here, Mr. Pap has been misled by certain of his key expressions. Consider, for example, the expression 'ostensively definable'. It is true that 'red' is ostensively definable in the sense that anyone who understands it is normally able to point out what things are red *if there are any*; but this is not to say that he is able to point out red things in the non-hypothetical sense distinguished above. In failing to observe this distinction, Mr. Pap has equivocated. Systematic with this equivocation is a similar one upon the phrase 'could be explained', in the passage we have quoted at length. And again an equivocation occurs upon the phrase 'unless at least one red object existed', where the word 'existed' would legitimately have a hypothetical meaning, but not the categorical meaning which Mr. Pap supposes. And finally, in addition to these equivocations there seems to be one also upon the word 'universe' in the quoted phrase, 'In a universe'. For here Mr. Pap seems to suppose that a universe of continents and oceans and coloured objects must be as unchanging, in respect to the existence of simple qualities, as is the significance of a simple-quality word like 'red' in a given *universe of discourse*, where change would create a new universe and hence is ruled out *a priori*.

It seems to be in some such way as this that Mr. Pap is led to his mistaken conclusion, whichever of the forms (1) to (4) we suppose it to take.

Might it be argued none the less that at least one of the group (1) to (4) holds true? If this be contended, we must protest that in none of them can we discover a self-contradiction, and we insist that a self-contradiction is not something which we can fail to see in sentences which we understand. What we normally call self-contradictions are statements like 'This is red and not red (in the same place)', 'This table is quite square and quite round', 'To-morrow is Tuesday and Wednesday', and 'No A's are B's and some B's are A's'. And clearly none of the supposed self-contradictions in (1) to (4) is like these latter in the way these latter are like each other.

Perhaps Mr. Pap would argue that even these latter statements

<sup>1</sup> In knowing how to use the word 'red' we do not know that there will be even one single affirmative instance; nor do we know that there will be even one single negative one, nor even one borderline one; nor, I think, do we know with formal conclusiveness that there will even be an occasion of a fourth sort, on which all question of redness is simply inappropriate. All we know is that any grammatic occasion must belong to one of these four sorts.



are not exactly like each other, not all equally flat in their self-contradictoriness. Perhaps he would argue that 'This is red and not red' is more flatly self-contradictory than 'To-morrow is Tuesday and Wednesday' or than 'No A's are B's, etc.'—and that at least one of the full quoted sentences in (2) to (4), say for example the one in (4), which we shall hereafter call S, is in turn different only in being still less flatly self-contradictory. That is, Mr. Pap might argue that what we normally call self-contradictions range from more flat to less flat, from more obvious to less obvious, and that they shade into sentences like S *before* they cease being self-contradictory, and that S is therefore not excludable from their class. But if Mr. Pap argued in this manner, what sort of claim would he be making? We grant that not all self-contradictions can be diagrammed, as it were, or represented formally, with equal simplicity. But we cannot call S self-contradictory even very occultly. We repeat that a self-contradiction, if it occurs, is not something which we can fail to see in sentences which we understand. He could hardly claim that we do not understand S. More probably he would claim that there is something *about* S which we have not understood, which he might describe in Formalistic terms by saying that S is self-contradictory in a special technical way, in something known as a high level of 'metalanguage' (note reference to Carnap, p. 245). But even if this claim could be stated clearly, no amount of Formalist machinery can change the fact that S is not like what we call a self-contradiction in ordinary deductive logic. It may seem that Mr. Pap could force us to acknowledge S as self-contradictory, by insisting that in ordinarily using the word 'red' we assume that there are and will be red things, and that this assumption amounts to a syntactical (logical) rule. But, because we could still point to the *empirical* nature of the assumption in our ordinary usage, Mr. Pap would have accomplished precisely nothing.

Thus far I have taken Mr. Pap at his own word, and investigated the rather extreme thesis which he claims to establish—namely that the commonly-understood significance of 'red', as long as it persists in our language, is *logically* conclusive evidence for there concurrently being red things (at least one). We have observed this thesis to be false because it implies the impossibility of reporting or of imagining that everyone had become red-blind, or again, the impossibility of giving and carrying out instructions to destroy or recolour all red things. Thus, we have observed, Mr. Pap has failed to refute the sceptical view.

But did Mr. Pap merely intend too much by his argument? Could he not have narrowed it down and held simply that the understood significance of 'red' logically implies the *past* existence of some red things? Suppose, as an exception to the sceptical view, he had offered merely the statement 'There *have* been red things', and argued merely that the understood significance of

this statement necessitates its truth. What then should we have to say?

I wish to consider this because this seems to be what Mr. Pap intended, as it were, to be maintaining. I think that if alongside his extreme thesis this more moderate one had been placed, and the difficulties in the extreme one pointed out to him, he would have preferred to hold the moderate one, and thus to put his anti-sceptical argument from ostensive definition in the less extreme form.

But even this more moderate thesis is vitiated by difficulties. As a challenge to scepticism it is not cogent because in one way or another it begs the points which the sceptic has chosen initially to doubt.

To make this clear, let us consider these five statements :

- (a) 'This is red' is significant or understood.
- (b) 'This is red' has a certain kind of significance which can be possessed by no sentence not employing the word 'red'.
- (c) To understand 'This is red' is to have learned it in application.
- (d) To have learned 'This is red' in application implies 'This is red' to have been true.
- (e) 'This is red' has been true.

And let us note the relations between these statements. Clearly (a) and (c) and (d) together imply (e). But clearly (a) alone does not imply (e). And clearly (b) does not imply (e).

Now, interpreted in terms of these statements, Mr. Pap's thesis (as modified) would be that (e) is true either as a logical consequent of (a), or as a logical consequent of (b), or as a logical consequent of (a) and (c) and (d) together. I say that his thesis would be one of these three, although I am not sure which of the three it would be. Sometimes he writes as though he would hold the first of them. For example, he writes :

"I should like to call attention to a class of statements which are explicitly existential statements, which are not analytic in the usual sense (their contradictories involving no formal inconsistency), which have, however, the peculiar character that they are true, if they are at all significant. . . . [These] existential statements are such that their truth *necessarily follows* from the fact that they are significant" (pp. 234-235, his italics).

And to this he adds the remark : "That truth should be entailed by significance is . . . 'peculiar', since normally significance is a necessary but not a sufficient condition for truth". Here it seems, then, that he would hold (e) to be true simply as a logical consequent of (a). But there are other passages, like the one which we quoted at the beginning, in which he seems to hold the more cautious view that (e)'s truth is a logical consequence, not of (b), but of (a) plus (c) plus (d).

But whichever of these three positions he would take, in no case would he be refuting the sceptical view. As for the first, the sceptic normally admits, of course, the truth of (a), but very properly denies that (e) follows therefrom. As for the second, although the sceptic might admit (b), he would deny that (e) logically follows. As for the third, the sceptic must admit that (e) follows from (a) taken jointly with (c) and (d), but he denies the *truth* of just such statements as (c), and may also deny (d).

Consider this third case more in detail. First, as to (c). Obviously (c) is the very sort of thing which the sceptic has chosen initially to question. His view is characterised by the claim that for such a statement as (c) itself we require *logical* proof, and of course none is available. For (c) is a statement about the past and about external objects; and such statements are incapable of conclusive logical proof because, involving endless verificational procedures as they do on the sceptic's view, they permit of no end to relevant and possibly exceptional data. Second, as to (d). Even if the sceptic were to grant (c), he would not have to grant (d), for against (d) he could bring the further objection that ostensive definition is not *logical* evidence for the truth of the sentence which it presents or certifies for us. Ostensive definition in this respect is not like verbal definition, and we must avoid being misled by the use of the same word 'definition' for both. In verbal definition, when the offered sentence is true by definition, it is guaranteed to be true solely by virtue of its form or its formal relation to other sentences. Its certification is exclusively verbal, exclusively formal, *logically conclusive*. But ostensive definition is different. Here the offered sentence is *not* being certified in the same formal way. The evidence which is now being specified as ideal is *not* verbal, not formal, not logical, but instead perceptual. And we cannot possibly make the perceptual evidence formal or logical, because if we were to try doing so we should have to employ the offered sentence in a statement or assertion *whose conformance to the ostensive definition cannot be judged formally*. Hence the expression 'used as defined' cannot quite have the same sense, does not quite take the same criteria, in respect to ostensive definition as in respect to verbal definition. We cannot say 'true by ostensive definition' in analogy to 'true by definition' as though thereby we could refute the sceptic; for in the case of ostensive definition the test for whether the assertion conforms to the definition is no longer reliable in the formal sense in which the sceptic thinks of reliability. Thus Mr. Pap would clearly be mistaken in supposing the sceptic must allow that 'This is red' is true by ostensive definition. Mr. Pap has evidently been misled by a phrase (see p. 238, ll. 12 and 26, also p. 244, l. 24). And so, since the sceptic need admit neither (c) nor (d) as capable itself of logical proof, the third form of Mr. Pap's modified thesis would be no more cogent than the first two forms.

I have had to treat the fallacy of the phrase 'true by ostensive definition' in a cursory manner; yet I have tried to show how wrong it is to sanctify arguments from ostensive definition as though ostensive definition somehow combined the formal assurances of verbal or logical definition with the applicative significance of empirical descriptions.

Considering Mr. Pap's paper in its entirety, its failure is in respect to the well-known sceptical view of empirical statements. Mr. Pap would be less misleading were he claiming only to make the sceptical view less persuasive. Unfortunately he claims to be *refuting* it. He claims to show that if the sceptic grants statements like 'There are red things' to be significant in a certain way, then the sceptic is logically compelled to grant that such statements are true, or by our modification, have been true. But Mr. Pap's argument has failed to show this, and we have pointed to certain verbal confusions which seem to have led him into his error.

Mr. Pap would have made a more convincing challenge of the sceptical view if, following the course already taken by Morris Lazerowitz and Norman Malcolm,<sup>1</sup> he had held the sceptical view to be an oddity because it attempts to exploit the fact that the distinguishing mark of empirical statements is that neither they nor their negations are self-contradictory. That is, Mr. Pap might better have argued, as these two writers have done, that insofar as the sceptical view pretends to be relevant to our practice of regarding some empirical statements as certain, it involves an equivocation, confusing the deductive sense of 'It is certain' with the empirical, and demanding of the empirical that it have the formal certifiability which by definition it cannot have.<sup>2</sup>

I do not overlook that Mr. Pap regards himself as making the same point as Malcolm. Mr. Pap writes :

"Let me finally illustrate my point in terms of the existential statement which is the very thesis under discussion, viz., the statement 'there are indubitable existential statements'. . . . Now I suspect that the

<sup>1</sup> M. Lazerowitz, "Strong and Weak Verification", *MIND*, XLVIII, April, 1939, pp. 202-213; and N. Malcolm, "Certainty and Empirical Statements", *MIND*, LI, January, 1942, pp. 18-46.

<sup>2</sup> I do not mean to say that the sceptical view has no excuse in some connexions. It can be defended, for example, as a metaphor asserting that there is no check-up superior to observing objects themselves in the way in which this is superior to observing merely shadows or reflexions or observing how the objects look from handicapped perspectives or under handicapped conditions. It can also be defended as a metaphor, but a misleading one, reminding us that if a statement be taken as a prediction, it is logically more than a summary of all observation thus far. Or again it can be defended as a metaphor, but again a misleading one, asserting that if the phrase 'empirical statement' be understood in the sense of what has no end of possibly relevant data or check-up, then no empirical statement can be conclusively true or conclusively false.

statement 'there are no certain empirical statements' is true only in so far as it is analytic; and it will be analytic, if 'certain' is used as a synonym for 'analytic', and the classes of analytic statements and of empirical statements are defined as mutually exclusive. . . . But if 'certain' does not have the meaning of 'analytic' . . . then, it seems to me, the statement 'there are certain empirical statements' is indubitable in the sense of being true by ostensive definition. That is, if pressed to explain what one means by 'certainty', as applied to empirical statements, one will naturally mention some empirical statement, such as 'there are tables in this room', which one regards as indubitable. . . . This point has been made . . . by Mr. Malcolm in his article 'Certainty and Empirical Statements' . . ." (p. 244).

Here Mr. Pap is claiming not simply that 'certain' is like 'red' or that 'There are empirical statements which are certain' is like 'There are red things', but also that Malcolm's discussion of 'certain' in *MIND*, 1942, is like his own discussion of 'certain' and hence like his own discussion of 'red'. But surely Mr. Pap is mistaken both about Malcolm and about an analogy between 'certain' and 'red'. As for Malcolm: nowhere in Malcolm's discussion did there occur any such expression as 'ostensive definition', nor any argument comparable to Mr. Pap's. In challenging the sceptical view, Malcolm argued in a very different manner, and his citing of samples was merely incidental. This I must leave as obvious to anyone who examines Mr. Pap's paper and Malcolm's side by side. Secondly, as for Mr. Pap's analogy between 'certain' and 'red': actually the difference between these two expressions is so great as to admit of very little analogy at all. While neither the word 'red' nor its opposite occurs in the sceptic's formulation of his view, the word 'certain' or its opposite or both must necessarily be used by him. Hence his view can be discredited without any argument from ostensive definition, and to add the latter as Mr. Pap has done, is to confuse the issue as well as to beg the question. The argument from ostensive definition is simply irrelevant. For the sceptic does not doubt the existence of statements that are *certain*, nor of statements that are *empirical*, but only of statements that are both. Since he assumes that we *are* acquainted with cases of certainty (' $2 \times 2 = 4$ ' 'If no A's are B's then no B's are A's'), and that we *are* acquainted with cases of empirical statements, therefore when he says 'There are no statements which are both empirical and certain' he is saying nothing at all like 'There are no red things'. For the notion of empirical certainty is verbally definable, while the notion of redness is not. Against the statement 'There are no statements which are both certain and empirical' a more proper challenge would be to insist not that ostensive definition of the doubted class is *performable* (as Mr. Pap would have it) but rather that for the sceptic's sense of 'certain empirical statements' it is necessarily *impossible*. Mr. Pap seems to have been misled by a superficial likeness between 'There are no certain empirical

statements' and 'There are no red things'. I should call this likeness only slight because 'certain empirical statements' does not even have the same number of adjectives as 'red things'.

I can make only passing mention of one further point, namely that Mr. Pap's objection to an argument by C. I. Lewis (p. 245, referring to pp. 279-283 of *Mind and the World Order*), treats ordinary language as though it were precise and formalised like a logician's artificial language, and wholly fails to recognise that the 'interminable verification' doubt, as we may call it, arises largely from mistaking verbal dubiety or vagueness for *empirical* dubiety, and from exaggerating the former by supposing that sentences-in-context are as vague as sentences-out-of-context. But this point would require a detailed discussion of its own.

C. D. ROLLINS.

## R. M. HARE ON IMPERATIVE SENTENCES: A CRITICISM

IN a recent article in *MIND* (January, 1949) Mr. Hare attacks the view which "excludes from the subject-matter of logic all sentences except those which purport to give information, *i.e.* to state that something is or is not the case", the "criterion which . . . says . . . that indicative sentences are the only sentences with which logic is called upon to deal". Mr. Hare's method of attack consists in showing that "the logical behaviour" of imperative sentences "is in many respects as exemplary as that of indicative sentences and in particular that it is possible to infer an imperative conclusion from imperative premises". In fact Mr. Hare goes further and purports to show "that inference and contradiction, two of the things about sentences which logic especially studies, can be studied in commands as well as in statements". While I agree with Mr. Hare that it would be wrong of logicians to confine their attention to indicative sentences, and of these only to "fact-stating" sentences, I shall try to give some reasons for thinking that Mr. Hare's attack is in important respects confused, that his assertion that "inference and contradiction . . . can be studied in commands as well as in statements" is false, and thus that Mr. Hare's method of bringing to logicians' attention the need to study imperative sentences cannot be recommended.

I begin by considering imperatives and commands. Let me say at once that I am going to use 'imperative' and 'command' in such a way that sentences only can properly be described as imperatives, a command being a certain use of certain kinds of sentence, usually of sentences in the imperative mood. This is admittedly a restriction of the meaning some philosophers have given to 'imperative' but it is, I think, a salutary one. Thus imperative sentences, *e.g.*, 'Do what your father tells you', 'Vote for Churchill', 'Come to supper', 'Take this cake back to the baker', are not, nor can ever be, commands, or exhortations or requests, or indeed anything but sentences, although, of course, they are sentences which may be used to command. But these sentences have other uses, *e.g.* to advise, exhort, request, entreat, instruct, direct, etc. Indeed, imperative sentences are comparatively rarely used in common speech to command; they are much more frequently used in other ways. Equally important, sentences which we should not normally regard as being in the imperative mood, perhaps, *e.g.* 'Mary will show you your room, Mrs. Prendergast', are sometimes used to direct or command; so are sentences which contain words conventionally used to indicate some other use. Thus 'Please give me my change'. In brief,



- (a) An imperative sentence is not a command.
- (b) We do not use imperative sentences solely to command.
- (c) We sometimes use sentences, not—or not obviously—in the imperative mood to command.

These points seem obvious enough and I cannot think that they have not occurred many times to Mr. Hare. So far as I can see, however, Mr. Hare mostly ignores the last two ((b) and (c) above), and seems not to have made up his mind about the first. Thus he says (p. 22), "I shall take a class of sentences, namely imperatives, and shall show that their logical behaviour is in many respects as exemplary as that of indicative sentences . . ."; "Knowledge how to do something is normally communicated . . . by means of imperative sentences . . ." (p. 23); but also says (p. 24) "Now sentences are traditionally divided into three classes, statements, commands, and questions"; "Such an enquiry would most naturally begin with simple singular commands, like 'Come in', and proceed later to more complicated sentences" (p. 24), and again, as already quoted, "it would appear then, that inference and contradiction, two of the things about sentences which logic especially studies, can be studied in commands as well as in statements" which perhaps indicates the adoption of a "half-way" position.

The failure of Mr. Hare to bear these three points about imperative sentences always in mind is perhaps directly productive of the conclusion he arrives at which I must regard as erroneous, and leads him to make remarks which seem to me misleading or false. Consider, for example, the following remark which occurs in a discussion of the attempt of certain writers to banish ethics from philosophy on the grounds that ethical sentences are "crypto-imperatives" or "contain an imperative element". He says, "Ethical sentences are not the only kind of sentences to be suspected of being imperatives in disguise. They are in good company. Some have said that definitions and some even that all analytical sentences are rules; and a rule is a universal imperative." I am not clear whether Mr. Hare himself is of the opinion that a rule is a universal imperative (on the whole I think he is), or that definitions and all analytical sentences are rules (on the whole I think he is not). But this remark is important for two reasons which lead me to discuss it first. First, Mr. Hare's suggestion is that so far as many philosophers are concerned, to accuse a sentence of being an imperative "in disguise" is to outlaw it from the class of logically-interesting utterances; second, because his method of bringing imperatives back into the fold is to show that their "behaviour" is as "exemplary" (i.e. of the same sort?) as that of indicative sentences. Now consider the following sentences which I take to be examples of the kinds of sentence Mr. Hare has in mind:

- (1) 'All Britons are Europeans'; 'An animal is a vertebrate';
- 'Every strike is communist-inspired'; 'All men are mortal';
- 'All red objects are coloured'.

I think that at least some philosophers would regard these sentences as "stating" (*i.e.* capable of being used to express) rules. But whether or not these sentences are correctly analysed as expressing rules, it seems to me obviously incorrect to say that these sentences are universal imperatives though not perhaps to say that they are universal sentences. Clearly, however, it is plausible, and I think illuminating, to regard these sentences as equivalent respectively to:

(2) 'Any person you may correctly call a Briton you may correctly call a European'; 'All organisms classified as animals are to be classified as vertebrates'; 'Whenever a strike occurs regard it as the work of the communists'; 'Expect any man you may encounter to die one day'; 'In any true sentence in which 'red' occurs, substitution of 'coloured' for 'red' will result in another true sentence'.

Each of the sentences of this group seems to me capable of being used to express a rule, and the phraseology of three of them, at least, seems to me to suggest that it would be natural to use them to give instructions if not to command (and thus plausible to call at least these sentences imperative sentences), though each has a different grammatical structure from the rest. I think also that there are other possible uses of the sentences in (1) which would not be describable as "giving a rule" or "giving a command". Whether it would be correct to describe these uses as "making an assertion" is a point I do not wish to discuss. All I want to point out here is that the sentences in (1) are certainly not imperatives, but might be used—perhaps even ought to be used—to make rules, or to give directions, or to command. The best way to interest philosophers in such sentences, even though it is at the same time asserted, for example, that they "state" rules and do not "state" facts, is not, so it seems to me, wrongly to call them "universal imperatives" or commands (or, of course, rules or directions), and then attempt to show that commands (and I suppose also rules and directions) may "contradict" each other, or when arranged in what we are asked to call a 'syllogism' permit inferences to be drawn, but simply to devise examples showing how such sentences might be used to give rules or directions or to command.

Consider another remark which occurs on p. 24, *viz.* "It would seem, in fact, that questions can be translated without loss of meaning into commands; thus 'Who is at the door?' can be translated 'Name the person who is at the door' . . . and 'are you married?' can be translated 'I am/am not \*married, \*Strike out whichever is inapplicable'". Now I cannot agree that a question can ever be translated into a command with or without loss of meaning. But I do agree that sometimes an imperative sentence may be used in contexts in which an interrogative sentence would normally be used. Thus I would agree that in circumstances in which I should normally use 'Who is at the door?' I might use instead 'Name the person

who is at the door', though I think it rather improbable that I should. On the other hand I can imagine circumstances where it might be perfectly correct for me to use (and therefore where I might use), 'Who is at the door?' but grossly improper for me to use (and therefore where I should not use), 'Name the person who is at the door' (e.g. when talking to the Dean). But I cannot say as much for the second of Mr. Hare's examples, because whereas I can conceive that I might write, I can conceive of no situation in which I would say, 'I am/am not \*married, \*Strike out whichever is inapplicable' instead of 'Are you married?' One of the things which makes me think that Mr. Hare has not kept the three points about imperative sentences I mentioned in mind, is his disregard for normal English usage.

I now want to consider Mr. Hare's two main contentions, *viz.*, that inference and contradiction can be studied in commands. Contradiction first as I think it is of lesser importance.

I must begin by admitting that I am not sure whether Mr. Hare means to assert that an imperative sentence may contradict another, or that one command may contradict another. Thus on p. 28 he says, "It is hardly necessary to point out that the contradictory of (2.1) according to the usage which I am suggesting, is. . . . No showing of her room to Mrs. Prendergast by Mary at time *t*, yes". Since (2.1) is also a sentence, *viz.*, 'Showing of her room to Mrs. Prendergast by Mary at time *t*, yes', it would seem that Mr. Hare holds that one imperative sentence may be the contradictory of, rather than, contradict another. Again on p. 34 he says, "closely connected with the fact that it is possible to infer in imperatives, is the fact that it is possible to give or receive contradictory orders". On the same page, however, he says, "That it is descriptives and not dictors which contradict, will appear also from the following consideration", and if I understand Mr. Hare aright, descriptives and dictors are parts of sentences. However, I think I shall interpret Mr. Hare correctly if I take his view to be that two imperative sentences may be contradictories while two commands may contradict. Now I cannot agree either that one command can contradict another, or that one imperative sentence be the contradictory of another. To command both that the floor be scrubbed and that the floor be not scrubbed is not to contradict oneself, although of course it is to make whoever is being commanded bewildered and wonder which command is to be obeyed. Thus I would agree that one command may countermand another, that the use of one imperative sentence may be inconsistent with the use of another, that obedience to one command may be incompatible with obedience to another, that two imperative sentences may be incompatibles. Mr. Hare may choose whichever of these expressions he prefers or some other similar of his own devising. What I must object to is Mr. Hare's use of the verb 'to contradict', in which he says that one command may contradict another, and that to command both that a thing be done and be not

done is to contradict oneself, that two imperative sentences may be contradictories. I think it is well established that we only use this verb in connexion with assertions, and with sentences used to make assertions. Mr. Hare's use is the more remarkable in that he admits on page 36—unless I misunderstand him—that “imperative sentences are not either true or false”, *i.e.* that it is an improper usage of ‘true’ and ‘false’ to characterise an imperative sentence in this way. I cannot think, then, on what grounds Mr. Hare defends his usage of ‘contradict’. To object to Mr. Hare's usage, however, is not to say that logicians should avoid studying imperative sentences because no two such sentences can be contradictories. If Mr. Hare is urging that incompatibility or inconsistency is worth the study of philosophers as well as contradiction then I fully agree with him. But it seems to me that if most philosophers do avoid studying imperative sentences—and I am not sure that this contention is correct—then the way to persuade them to change their attitudes is not to misuse a word with such an important philosophical use as ‘contradict’ in the hope that this will “sanctify” the “untouchables”.

I now turn to Mr. Hare's most important contention, *viz.* that inference can be studied in commands. Several examples are given to illustrate the contention that “it is possible to argue in imperatives”. For the sake of brevity I shall mainly confine my attention to one of these which is also cited as an “imperative interpretation” of a well-known indicative “sentence-formula”, *viz.*

Let all men be mortal.  
 Let Socrates be a man.  
 Let Socrates be mortal.

Of this it is claimed that it is an example of “arguing in imperatives”, is a syllogism, and is “valid” because ‘Let Socrates be mortal’ can be inferred from the conjunction of ‘Let all men be mortal’ and ‘Let Socrates be a man’. I regret that I must begin by objecting to Mr. Hare's usage once more. I have always understood that to argue is to maintain by reasoning, or to prove, and if ‘Let all men be mortal’ and ‘Let Socrates be a man’ are imperative sentences as Mr. Hare says they are, *i.e.* may be used to give directions or commands, then I cannot see that if I command—or if the Deity Himself commands—that all men be mortal and that Socrates be a man, that I—or He—can be said to be reasoning; or that if I go on to command that Socrates be mortal, that I am maintaining by reasoning, or proving, a conclusion which in some way is expressed by, or perhaps just is the sentence ‘Let Socrates be mortal’. I am also acquainted with several meanings of ‘argument’ but none which permits me to describe the “sentence-formula” above as an argument. Since I have always understood that a syllogism is a kind of argument I must also disagree that Mr. Hare's sentence-formula is properly described as a syllogism. What disturbs me

most, however, is the contention that 'Let Socrates be mortal' can be inferred from the conjunction of 'Let all men be mortal' and 'Let Socrates be a man'. Now to use examples of Mr. Hare's, I can understand that if I were to command, or better, to advise, a man to use an axe or a saw and then commanded him shortly after not to use an axe (because as Mr. Hare suggests I fear he may cut off his leg), it would be very natural of him to assume that I wanted him to use a saw. But I cannot agree that if I command him to use an axe or a saw and then command him not to use an axe, I have commanded him to use a saw—which if I understand Mr. Hare properly is what he says I am doing. I have not commanded the man to use a saw at all, but only to use an axe or a saw, and not to use an axe. Perhaps this is too nice a point. I will try to make myself clearer by an illustration. My wife says to me, "Polish the floor or wipe the dishes", and being a husband I regard this as a command. Immediately afterwards she says, "Don't wipe the dishes". My first reaction is probably to ask her to make up her mind what it is she wants me to do, but thinking better of it I assume she means me to polish the floor. As I am about to start doing this, my wife then commands, "Don't polish the floor but brush the front door step". This shows me that my natural assumption, *viz.* that she wanted me to polish the floor was incorrect. Instead it is her wish that I should brush the front door step. Thus while it may have been perfectly natural, perfectly reasonable of me to assume that she wanted me to polish the floor and perhaps unnatural and unreasonable of her to command me to brush the front door step, she was not commanding me to polish the floor nor was my "inference" that she wanted me to polish the floor "valid". As for my inference—which Mr. Hare wants me to term the "conclusion" of her "argument"—this found expression not in an imperative sentence but in an indicative sentence, *viz.* 'My wife wants me to polish the floor'; and this wasn't properly an inference if the use of 'inference' implies that 'my wife wants me to polish the floor' is deducible from, follows necessarily from, the conjunction of my wife's commands (and it is, I think, with this familiar implication of deducibility, of necessary consequence, that Mr. Hare uses 'inference'), but only an expression of a perfectly natural assumption which turned out to be incorrect.

One last word. I must emphasize that I agree with Mr. Hare that philosophers do wrong to confine their attention to indicative sentences, more especially if they further confine themselves to "fact-stating" indicative sentences. But I cannot agree that Mr. Hare's method is more to be recommended as a remedy than Professor Ryle's or Professor Stevenson's (which in both cases, though in different ways, I take to be to draw attention to interesting uses of imperative sentences). The Procrustean bed has never proved a satisfactory piece of philosophical furniture.

A. F. PETERS.

## VII.—NEW BOOKS.

*Opera Omnia Sancti Anselmi*, vols. i, ii, and iii. Ed. Fr. S. SCHMITT, O.S.B. Edinburgh: Nelson, 1946. £2 2s. net per vol.

WHAT we have here is three volumes out of the six which are to complete a new standard edition of St. Anselm's works. Several Benedictine scholars were to have collaborated on it. The death of Dom Wilmert left all three first volumes to Dom Schmitt. The work was ready in 1938, but the stocks were destroyed by accident of war. What Nelson has published is a photographic reproduction. The typography was never very enterprising, and the photographic process makes it dull and thick. In a work so handsomely margined and so amply planned this is disappointing; but the result is still the most readable Anselm to be had.

The editor excuses himself from writing an introduction. He and Dom Wilmert have written monographs on the principal Anselmian texts; and besides, he is saving himself up for an appendix to the completed work. Meanwhile, he supplies us with a selective *apparatus criticus* which is solidly based, and sufficient for any ordinary purpose. A feature of the highest value is the reference-margin. It is possible to make the references fairly complete, because the library which St. Anselm really used was so small, as Koyré showed in his excellent study: it was virtually confined to Scripture, St. Augustine, and Boethius, for the philosophic and theological writings. Where the parallels are both close and interesting, the editor prints the actual words of St. Anselm's authorities. With his eye on the reference-margin, the reader can study St. Anselm realistically; that is to say, as Augustinianism argumentatively stated.

The three volumes so far published contain virtually all that is of interest to the philosophical reader. The bulk of the correspondence is still to come, but that is the concern of historians. The philosopher who supposes St. Anselm to have awoken from a mediæval stupor, stated the ontological argument, and relapsed, will here find all the material he needs for correcting that impression. The *Proslogion* falls into place beside the *Monologion*, the *De Veritate* and the Trinitarian treatises. The mass of his work enables St. Anselm to be seen as a man who had a philosophy.

Superficially viewed, his philosophical predicament suggests modern parallels. Virtually the only philosophical discipline known to his contemporaries was logic: metaphysics they scarcely had, not, indeed, because they had discarded science, but because they had not come across it. They were passionate 'dialecticians', and they exercised their logic on belief as it stood, without any intervening buffer of metaphysical philosophy. The extreme dialecticians demanded that every belief should be demonstrated before it was believed. St. Anselm took the contrary position, that believing comes first; but all beliefs, he held, are ideally open to logical examination: what has been believed can be 'understood', and its grounds appreciated.

Such a position may suggest to the modern mind something like this: we accept the hypothesis that the discourse expressing our beliefs is

significant, and proceed to analyse without prejudice the forms of statement and of argument it employs, to see of what logical nature they are. If any persons were now to form an Anselmian Society for the execution of such a programme, they might hopefully invoke the blessing of the Saint on their endeavours. This, perhaps, is the true Anselmian task; but it is certainly not a task which St. Anselm in his day knew how to set about.

'*Fides quaerens intellectum*' sounds promisingly, but it is the preface to disappointment. *Intelligere* is not to understand what the propositions of faith really assert, or what sort of reasonings faith herself employs: it is the supplying of a 'dialectical' proof for the tenets of faith. But (one may wonder) if the 'dialectic' of the period was purely logical, how was it going to supply metaphysical proofs? The answer comes all too quickly: St. Anselm branded 'nominalism' as a heresy, and insisted on a 'realism' which turned logic into metaphysics. Logic might be the science of speech, but the distinction of terms in common speech corresponded to a real composition of elements in the structure of being. Logical questions, then, were metaphysical questions, and one could slide into traditional Platonism: for is not Platonism a metaphysic based on 'realism' about logical universals?

So *intellectus* has his fangs drawn, and advances to greet *fides* with a platonic kiss. But perhaps *fides* will be bashful, having learnt her manners not from Plato, but from Moses and St. Paul. An unnecessary apprehension: *fides* has been to school with St. Augustine, and learnt to model herself on platonic ontology. It is therefore more edifying than surprising, how well *fides* and *intellectus* agree. To alter the figure: the Platonic dog digs up with demonstrative zeal and all the zest of discovery the bone which he had previously buried in the garden of faith.

The result is Augustinianism argumentatively stated, but it had to be argumentatively stated: this was the proper preparation of the ground for Scholastic Philosophy. The work was brilliantly performed, and was ornamented with original speculation.

A. M. FARRER.

*Annales Universitatis Mariae Curie-Sklodowska*, Lublin, Polonia. Section F. Vol. I. No. 1. *Forms and motives of negative reactions*. T. TOMASZEWSKI.

THE purpose of this treatise is the description, classification, and explanation of such facts as acts of disobedience, bad behaviour, perverseness, annoyance, bad mutual relations, bursts of anger, etc.

The treatment of the above phenomena by various psychologists is very often confused because (i) they use everyday terminology in which psychological elements are mingled with moral and practical ones (e.g., malice); (ii) the distinction between description and explanation is blurred. To avoid the above confusions the author tries to apply in his analysis the concept of pure description and pure explanation.

Vol. I. No. 2. *The theory of knowledge of dialectical materialism*. N. ŁUBNICKI.

The author analyses dialectical materialism (which is a methodological and epistemological aspect of Marxism) and historical materialism (which is a sociological and historiosophical aspect of Marxism). Having found some difficulties in the theoretical justification of the views held by Marxist philosophers, the author concludes that the value of this philosophy consists in its accentuation of practice over theory.



Vol. I. No. 3. *Notes on the Aristotelian syllogistic.* J. SŁUPECKI.

By 'Aristotelian syllogistic' the author means not only the twenty-four valid moods of syllogism but also all the laws of conversion and of the square of opposition. Now two facts are taken into consideration:

1. It is known that some syllogistic theses become false if for their variables empty names (*i.e.* names without denotation) are substituted.

2. Łeśniewski's calculus of names (which he calls 'Ontology') has two properties relevant to our considerations:

(a) the theses of this ontology remain true if their variables are replaced by arbitrary names, and thus also by empty names;

(b) in terms of this system we are able to define all terms of the syllogistic.

Now Słupecki accepts as primitive terms universal and particular affirmative propositions. In his notation:

Uab	<i>i.e.</i> , every a is b
Iab	some a is b

and defines universal and particular negative propositions in the following way:

Df. 1.  $Yab = NIab$  *i.e.*, 'no a is b' is the defined equivalent of the negation of 'some a is b'.

Df. 2.  $Oab = NUab$  *i.e.*, 'some a is not b' is the defined equivalent of the negation of 'every a is b'.

Further Słupecki constructs four axioms:

- (i) CUabIab *i.e.*, if every a is b, then some a is b,
- (ii) CIabIba *i.e.*, if some a is b, then some b is a,
- (iii) CKUmbUamUab *i.e.*, if every m is b, and every a is m, then every a is b,
- (iv) CKUmbIamIab *i.e.*, if every m is b, and some a is m, some a is b.

By means of the above two definitions and four axioms every thesis of the Aristotelian syllogistic can be demonstrated. The four axioms are theses in Łeśniewski's ontology and therefore remain true even if empty names are substituted for their variables.

## A complete three-valued calculus of propositions. J. SŁUPECKI.

Łukasiewicz's three-valued system of the calculus of propositions (formulated 1920) is determined by the following interpretational matrix

C	0	$\frac{1}{2}$	1	N
0	1	1	1	1
$\frac{1}{2}$	$\frac{1}{2}$	1	1	$\frac{1}{2}$
1	0	$\frac{1}{2}$	1	0

Łukasiewicz recognises as theses of his system only such expressions as have the value 1 (in the above matrix) for all values of the variables. Thus 1 is the distinguished value of the matrix.

Now, a system is complete, if every possible function of the system can be defined in primitive terms of this system. The system of Łukasiewicz is not a complete system. This is shown by considering a function (let us call it Tp) which for all values of the variable has the value  $\frac{1}{2}$ .

Slupecki constructs a system determined by the following interpretational matrix

C	0	$\frac{1}{2}$	1	N	R
0	1	1	1	1	0
$\frac{1}{2}$	1	1	1	1	1
1	0	$\frac{1}{2}$	1	0	$\frac{1}{2}$

The distinguished value of the matrix is also 1.

The axioms of the system are :

- |                |              |          |
|----------------|--------------|----------|
| 1. CCpqCCqrCpr | 4. CRpNp     | 7. CRRpp |
| 2. CCNppp      | 5. CRCpqRq   | 8. CpRRp |
| 3. CpCNpq      | 6. CpCRqRCpq | 9. NRNp  |

None of these axioms is a consequence of the remaining axioms. Further the axioms 1. to 3. are identical with axioms of the two-valued system built by Łukasiewicz. In consequence, every law of the two-valued calculus of propositions is at the same time a law in the system under discussion.

This system has three characteristics :

1. every possible function of this system can be defined in terms of the system (in terms C, N, R, and the variables), that is to say, the system is complete ;

2. the system is not contradictory, *i.e.*, a single variable is not a consequence of the axioms ;

3. by adding to the system a proposition which is not its thesis, one obtains a single variable as a consequence.

*An attempt to axiomatise traditional logic.* J. Łoś.

The author analyses the meaning of simple propositions which occur in syllogistic systems. He employs the method of Sleszyński, according to which the meaning of a simple proposition can be defined as a disjunction of statements, each of which expresses a relation between classes denoted by its subject and its predicate respectively. *E.g.*, when 'some a is b' is true, one of the following four relations must hold between the class denoted by 'a' and the class denoted by 'b'.

- ( $\alpha$ ) a and b are identical ;
- ( $\beta$ ) the class a is included in class b without exhausting it ;
- ( $\gamma$ ) the class a includes the class b without being exhausted by it ;
- ( $\delta$ ) the two classes overlap, *i.e.*, each is partially but only partially excluded by the other.

Thus, according to Sleszyński, 'some a is b' is the defined equivalent of ' $\alpha$  or  $\beta$  or  $\gamma$  or  $\delta$ '.

Now, by using Sleszyński's method, three systems are analysed.

1. The system of Łukasiewicz determined by the following axioms :

- AŁ<sub>1</sub> Uaa
- AŁ<sub>2</sub> Iaa
- AŁ<sub>3</sub> CKUmbUamUab
- AŁ<sub>4</sub> CKUmbIamIab

In this system one cannot substitute for variables names that are empty (without denotation).

2. The system of Sleszyński. Sleszyński, who substitutes for variables

also empty names, obtains eight (instead of the five of traditional logic) relations between classes denoted by subject and predicate respectively. As a result of this interpretation the following laws of traditional logic became invalid :

- (a) all laws of the square of opposition except laws of contradiction ;
- (b) the law of conversion by limitation ;
- (c) all the moods of syllogism whose names contain the letter p, *i.e.*, Darapti, Felapton, Fesapo.

The axioms of Sleszyński's system are :

- AS<sub>1</sub> CIabIba
- AS<sub>2</sub> CKUmbUamUab
- AS<sub>3</sub> CKUmbIamIab

3. The system of Słupecki.<sup>1</sup> In this system such a change is introduced into the meaning of the universal affirmative proposition that the conversion by limitation is also valid when empty names are substituted for variables.

Next, the author constructs the five following axioms :

- A<sub>1</sub> Cexa''bexba
- A<sub>2</sub> Cexabexa''b
- A<sub>3</sub> CKNexmb'examexab
- A<sub>4</sub> Nexaa'
- A<sub>5</sub> Aexabexab'

Moreover, one finds demonstrations of theorems the most important of which are :

Theorem V.

Every law of immediate inference from a simple proposition which is defined according to Sleszyński's method, is a consequence of the axioms A<sub>1</sub>, A<sub>2</sub>.

Theorem VI.

The axioms of Sleszyński and of Słupecki are consequences of axioms A<sub>1</sub>, A<sub>2</sub>, A<sub>3</sub>, and of definitions according to Sleszyński's method.

Theorem VII.

The axioms of Łukasiewicz are consequences of axioms A<sub>1</sub>, A<sub>2</sub>, A<sub>3</sub>, A<sub>4</sub>, A<sub>5</sub>, and of definitions.

W. BEDNAROWSKI.

*Art and the Social Order.* By D. W. GOTSHALK. University of Chicago Press and Cambridge University Press, 1948. Pp. 253. 21s.

THIS book represents an attempt to describe the nature of æsthetic experience and to evaluate the position of art and the artist in society. It falls into three parts. In the first, Mr. Gotshalk examines traditional and current theories of the nature of æsthetic experience, and in criticising others develops a theory of his own. In Part II, the work of art is examined in its nature as a 'public object', and in Part III Mr. Gotshalk turns to wider issues, to a discussion of the position of the artist in society, concentrating especially on the contribution which the artist can make and the attitude which society should adopt towards him.

<sup>1</sup> The axioms of this system were given previously.

In the critical part of his book, Mr. Gotshalk's main contention is that theories of art have tended to concentrate unduly on some single aspect of aesthetic experience, with the result that they have committed the fallacy of mistaking the part for the whole. He distinguishes between the utilitarian functions of art and its 'terminal value', and rejects any theory which openly or by implication denies the 'intrinsic value' of aesthetic experience. He is especially critical of current theories based on modern psycho-analytical doctrines; in emphasising only the function of art as a means of escape or recreation, they have produced a nihilistic philosophy which neglects entirely the value of art as an end in itself.

Mr. Gotshalk's contention that most theories of art are unduly narrow and specialised can be accepted. Many theories have been based on the erroneous assumption that art is the special preserve of some single department of the mind, such as the intellect or the emotions. It is a commonplace that philosophy in general has suffered from the 'faculty psychology', but it is doubtful whether its effect on aesthetics has been fully realised. It seems to have been argued, for example, that the mind is divisible into several compartments, and that there is a subject-matter corresponding to each. For example, there is the Intellect whose concern is the accumulation of facts or Science; the Will whose concern is Action, and especially Moral Action, and finally the Emotions, which by elimination must be concerned with Art. This seems to be the origin of the still widespread view (the so-called Romantic Theory of Art) that Art is the special prerogative of the Emotions. Mr. Gotshalk is demonstrating, by implication, the absurdity of such reasoning, and so far his book is to be warmly welcomed as a rare departure from the traditional outlook. In this connexion, his criticism of Croce is especially noteworthy.

Mr. Gotshalk's positive contribution, based on the assumption that it is possible and advisable to introduce the means-end distinction to explain art is perhaps not so meritorious. He develops what may be called a relational theory, according to which art is a unity compounded of three factors: the creative process, the work of art, and the perception of it. He agrees that art may have several non-artistic functions, e.g. it may provide recreation, serve commercial, religious and other ends; but he insists that its proper rôle is to serve as something of intrinsic value in itself. Mr. Gotshalk rejects the notion of 'beauty' as an independently existing entity, but he seems to do so only at the expense of introducing another equally bogus but much vaguer entity, 'intrinsic value', within the means-end formula. He distinguishes between the perception of objects in everyday life as a means to action and the 'intrinsic perception' of a work of art, where the perception itself is the end. Certainly the perception of any object need not issue in overt action; but the fact that it fails to do so in some circumstances (which may be non-artistic) does not seem to warrant a sharp distinction between 'artistic' and 'non-artistic' perception, nor does it allow us to attribute the quality of 'intrinsic value' in the one case and deny it in the other.

In Part III, when Mr. Gotshalk considers the place of art in society the distinction between means and ends does not seem at all clear, for the justification of art seems to lie in the benefits it can afford on a national and international level. The nerve of the argument is that the materials of the work of art (which are well discussed in Part II), the opportunities for creation and the sources of inspiration originate in the environment of the artist; therefore he must take his place as an essential member

of the community, a place justified by the fact that he more than any other can provide objects of the highest value to the community. Society, in return, must accept him as an essential worker and allow him as much freedom as is compatible with responsibility. And we must have critics to keep the artist alive to his obligations. In this way the artist can make an important contribution towards international peace and security.

Mr. Gotshalk's book is carefully written, with an abundance of well-chosen quotations, and there is an adequate index.

J. L. EVANS.

*The Experimental Situation in Psychical Research.* The Ninth F. W. H. Myers Memorial Lecture, 1947. By S. G. SOAL. Society for Psychical Research, London. Pp. 63. Price 2s.

THERE is probably no one in this country at present who is better qualified than Dr. Soal to speak about controlled experiments in paranormal cognition and in this lecture he has given us firstly a summary of recent work in this sphere and secondly a preliminary report of his own most recent experiments with Mrs. Stewart. The basically simple card-guessing experiment is subjected at Dr. Soal's hands to an astonishingly ingenious series of variations, and he hints at more to come. There are some people who hold that we have now discovered all that the experimental technique can ever tell us about telepathy, and that our present need is for hard thinking about what we already know rather than for any new facts. Dr. Soal admits the need for hard thinking and wants more co-operation from philosophers, but he entirely dissents from this view. He points out that the number of subjects whose performance has so far been successfully and extensively investigated in this country is quite ludicrously small, and for all we know they may exhibit unrepresentative individual characteristics. His lecture should do much to convince its readers of the need for more and more patient experiment along the meticulously careful yet imaginative lines he has himself followed.

The book is illustrated with several photographs and a specimen scoring-sheet, and there is a good and well-arranged bibliography.

GEORGE E. HUGHES.

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